CORPORATE GOVERNANCE: A STUDY OF DIRECTOR LIABILITY, FIRM PERFORMANCE AND SHAREHOLDER WEALTH

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Dedication

To my wife, Revital and our two sons, Niv and Edaan.

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This study examines the relationship between the composition of the board of directors, director liability, the firm's performance and shareholder wealth. The existence of a director liability crisis is first examined. Both anecdotal and empirical evidence suggest that such a crisis did indeed occur. The evidence also suggests that the "crisis" primarily hurt firms that were performing poorly.

To verify the existence of a "crisis" and to gain insight into the effect director resignations have on firm value, a sample of firms, where more than one director resigned at the same time, is collected. This sample spans the period when it is hypothesized that a crisis occurred and the period following the "crisis". As predicted, shareholders response to directors resignations are significantly different during these two periods. During the "crisis" years the resignation of

directors results in a loss to firm value for all firms. The magnitude of the loss is directly related to firm performance. Alternatively, following the "crisis", the relationship between performance and shareholder response to the directors resignation is inverse and not always negative. These results suggest that the board's composition can effect firm value and that during the "crisis" period directors were hard to replace and therefore their resignations reduced firm value. The more negative response from poorly performing firms suggests that for these firms directors are especially valuable. Under normal conditions, i.e., after the "crisis", shareholders view changes in board composition as positive events in firms that are doing poorly, and as a negative signal from firms that are doing well.

An examination of the event that legally eliminated the "director liability crisis," i.e., the adoption of provisions eliminating directors' liability, provides further evidence as to the importance of directors to poorly performing firms. Shareholders of poorly performing firms respond positively to the adoption of these provisions, emphasizing the importance of maintaining the integrity of the board of directors. For other firms, this is less important and the adoption of these provisions does not effect firm value.

Table of Contents

List of Figures

List of Tables

Chapter 1: Introduction

1.1 Motivation

A corporation's board of directors is a governance device intended both to monitor and guide the firm. Although there is some evidence that the board's composition has a bearing on firm value [e.g., Weisbach (1988), Warner, Watts and Wruck (1988), Morck, Shleifer and Vishny (1989), Baysinger and Butler (1985)] there is also the view that the board is a passive body "rubber-stamping" the CEO's decisions [see, for example, Shaw (1989) and Lorsch and MacIver (1989)]. These authors claim that since the chief executive officer (CEO) plays a major role in choosing the outside directors, the board's ability to be effective monitors is compromised. In cases where the board may be ineffective, other governance structures that can alter directors' incentives and thus their behavior can be important.

The takeover market is one such external (market) governance structure that can discipline directors. Managerial neglect or misconduct is also deterred by the markets for managerial services and directorships [Gilson (1990), Kaplan and Riehaus (1990)] although it is unlikely that this market is completely efficient [Williamson (1985)]. Shareholders' ability to directly remove the directors and managers is severely limited as proxy fights are costly and difficult to win. Small investors lack the resources or knowledge required to win such a contest, while larger investors might find the alternative of a tender offer for the firm to be more attractive.

Another means of redress open to large and small investors is to sue the directors or managers for inadequate performance. Managers and directors can be held personally liable and shareholders can recover losses arising from mismanagement. The dramatic increase in lawsuits brought against management and directors in the 1980s attests to the popularity of this method of disciplining directors. Sued directors and managers suffer from potential monetary losses and legal costs. They may have to expend time away from their main business and may suffer the consequences of such a suit in the market for their services. Not surprisingly, directors view fulfilling legal requirements in their daily decisions as being very important [Lorsch and MacIver (1989), p.38]. More significantly, as this study argues, the legal threat facing directors increases for firms in distress.

If firm value is affected by directors' actions that, in turn, are influenced by the external (legal) governance structure, then firm value depends on the legal environment surrounding directors. Further, insofar as the legal environment facing directors varies with the firm's financial condition, directors' incentives and hence behavior is conditional on the financial health of the firm. Examining the interdependence between firm value, the external (legal) governance structure and the firm's financial condition is a major purpose of this research.

To examine these issues, this study focuses on a the mid 1980s, a period that has been labeled by the popular press, and by legal scholars as the "directors liability crisis." During this period, the number and size of lawsuits brought against directors skyrocketed. As a result of this increase and the legal uncertainty that accompanied it, insurance companies dramatically increased the cost of directors and officers liability insurance while substantially reducing its

applicability. Thus, some companies could not afford to purchase these policies, while for some directors the policies that were purchased did not supply adequate protection. Directors and officers liability insurance serves an important role in attracting outside directors to boards, an in enabling them to function appropriately. Without the protection of these policies, the personal wealth of the directors would be in jeopardy every time a lawsuit was filed. Because of the increased legal threats, the cost of serving on a corporate board increased to such a level that directors at some firms resigned, and others refused to take on new board positions.

This study examines two events associated with this "crisis": the resignations of directors from boards, and the adoption of provisions limiting director liability by many companies. These events can provide evidence regarding two issues:

1. did a crisis indeed occur?
2. what is the value that shareholders place on outside directors?

If a crisis did not occur and is just a result of "media hysteria", then the resignations of directors during the "crisis" period should elicit the same shareholder response as resignations during alternative periods. In addition, if the "crisis was illusionary then the adoption of liability limitation provisions (LLPs) that substantially reduce shareholders ability to sue directors should be viewed as negative by shareholders. However, if a "crisis" did indeed occur, and if shareholders value outside directors, then one would expect them to react more negatively to directors resignations during the "crisis" than following it. During the "crisis" these directors would be very difficult to replace. In addition, the

adoption of LLPs would now become an issue of balance between the value of being able to retain and attract outside directors and the value of being able to sue them.

An additional question that this research addresses is whether the value shareholders placed on outside directors is contingent on specific firm characteristics, and more specifically on whether the financial condition of the firm effects this valuation. Because of the unique role outside directors play in firms that are in crisis, especially in firms that are financially distressed, it is hypothesized that outside directors are more valuable to shareholders in financially distressed firms than in healthy firms.

To test the ideas discussed above, two empirical studies are conducted. The first examines the market's response to directors' resignations during and after 1984 through 1986, the "crisis" years. An event study is conducted for both periods and the results are compared. In addition, for each period cross sectional regressions are performed in an attempt to establish the relationship between the markets response and firm-specific variables, primarily firm performance.

A second empirical test is conducted to establish the stock price response to the announced adoption of an LLP following the "crisis" period 1984-1986. Two main questions are addressed: To what extent do changes in the boards' legal environment affect firm value? And, how does the firm's financial condition (normal or poorly performing firms) influence this market reaction?

1.2 SUMMARY OF RESULTS

A sample of 86 NYSE and NASDAQ firms where at least two directors resigned between 1984 and 1990 are identified. Of these, 47 resignations occurred during the "crisis" years 1984-1986, and 31 occurred in the years following it, 1988-1990. The results present evidence that suggests that there is a significant difference in shareholders response to directors resignation during and after the crisis. During the crisis, shareholders view directors resignations as a significantly negative event, while in the period after the crisis these resignations do not negatively impact shareholders wealth. These results provide evidence consistent with the idea that a directors crisis did indeed occur, and that shareholders value the presence of outside directors on their boards.

In addition, evidence is presented that suggests that outside directors are especially valuable to poorly performing firms, and that when they cannot be replaced, their resignation is viewed as significantly negative by shareholders. During the crisis years, shareholders response to the resignations is directly related to the firm's performance. Shareholders react more negatively to resignations from poorly performing firms than they do to resignations from firms that are doing comparatively well. Alternatively, in the years following the crisis this relationship is reversed, i.e., shareholders react more negatively to resignations from firms that are doing well than they do to resignations from poorly performing firms. A possible explanation for this result is that resignations from good firms provide a negative signal to the market, whereas resignations from poorly performing firms, during times when these directors can be replaced,

is viewed as a positive change in a faltering board. All these results are confirmed while controlling for a variety of firm specific characteristics.

For the second empirical study, a sample of 120 firms that announced their intent to adopt LLPs was used. For the aggregate sample, shareholders appear to view the adoption of an LLP as benign; there was no significant market response to this event. However, on a firm-specific level, the market reaction is clearly different between firms and is related to firm performance measured either on a "stock" or a "flow" basis. There is an inverse relationship between the market excess returns and various performance measures, suggesting that external governance is more important for firms with low economic rents or who are performing poorly, or that for these firms the cost for outsiders of serving on the board is large. This inverse relation is strong even after controlling for a variety of potentially contaminating events. These results suggest that the market views changes in the board of directors' external governance environment (the adoption of LLPs) as being more important to poorly performing firms than to normal/healthy firms.

1.3 Thesis Organization

Views on the importance of the board of directors and evidence with regard to a directors' liability crisis are presented in Chapter 2. Chapter 3 is devoted to a discussion of how the directors' roles change as a firm approaches financial distress. The first empirical chapter, Chapter 4, examines the market reactions to the resignations of directors during and after the so called liability crisis. Chapter 5 examines the market's reaction to firms adopting provisions

limiting their directors' liability as a response to the liability crisis. Finally, Chapter 6 presents the conclusions and discussion of future, related research avenues.

Chapter 2: Director Liability and the Director Liability Crisis

2.1 Views on the Role and Value of the Board of Directors

In order to bridge the separation of ownership and control [Fama (1980) and Fama and Jensen (1983)] the board of directors is established as shareholders' representatives in monitoring managers. The American Law Institute (1982) considers the outside director's monitoring of managers the corporate board's most important function. They claim that only outside directors can ask the difficult questions, and discipline managers for their mistakes.

There are many who argue that the board of directors is, for the most part, ineffective. Demsetz (1983), Hart (1983), Shaw (1989) and Lorsch and MacIver (1989), point to the fact that the CEO has a major influence on choosing the directors and in controlling the agenda at board meetings of most corporations. As Shaw (1989) puts it "It is time, indeed past the time, to discard the textbook notion that the board of directors is chosen democratically. No one believes this, but the myth survives. ... Loyalty to the shareholders has been displaced by deference to the 'host' CEO." Thus, the boards ability to monitor management and to provide it with guidance is not only limited by the fact that the officers sitting on the board are more knowledgeable regarding the firms operations, but also because the outside directors are often friends and associates of the CEO, hand picked by him for the job. As one director interviewed by Lorsch and MacIver states:

> "I think the CEO influences the composition of the board first, and sets the tone of what's considered on the agenda, what information is available, how issues are dealt with in committee or by the full board, and who is put on which committee."

These arguments lead many to the conclusion that the board of directors is ineffective as a monitor of management and that therefore it does little to reduce shareholder-management agency costs. According to this view outside directors, are not independent but are the CEO's puppets and contribute very little to firm value.

Fama and Jensen (1983), while recognizing the problems associated with monitoring by outside directors, argue that outside directors have the appropriate incentives to monitor effectively. They hypothesize that these directors are motivated to develop reputations as experts in decision control. Most outside directors are decision makers in some kind of organization, and the value of their human capital depends on their overall performance. These directors use their board membership to signal to the markets that they are decision experts who can work in a decision control system. Thus, when a firm does badly or when there is a breakdown in the effectiveness of outside directors' monitoring, the director's human capital is devalued by the market.

Part of the difficulty in assessing the board's value is that the inside and outside directors make differential contributions to the firm that extend well beyond the narrow monitoring function. The CEO and the other insiders' role as directors adds value to the company primarily because of their hands-on involvement and intimate knowledge of the firm's operations. They are thus vital

as suppliers of information and knowledge to outside directors who do not have this inside information and expertise.

In addition to their monitoring function, outside directors also have a related "guidance function": they influence the firm's choice of chief executive officer (CEO), compensation policies, long-term strategic objectives, dividend policies, and capital structure, to name a few. The importance of the guidance function of outside directors is gaining increasing recognition. A recent Wall Street Journal article reports that in the past decade, the number of boards with a 4-to-1 or greater ratio of outsiders to insiders has doubled and cites as possible reasons for this growing reliance on outsiders the need for fresh expertise, the need to confront management with tough questions, to help thwart takeovers, to deal with stiff global competition and to cope with the increasing threat of director liability (Timothy D. Schellhardt, "More Directors are Recruited From the Outside", Wall Street Journal, March 20, 1991).

It is unlikely that theoretical arguments alone can shed light on the extent to which boards of directors are indeed effective as monitors and as providers of guidance, this is ultimately an empirical question.

Early evidence on the board's effectiveness is almost entirely anecdotal. The responses elicited by Mace (1986) in his interviews with managers yields extensive evidence on their belief that outside directors are better monitors. The following responses of business executives are illustrative:

> "The fact that you know that outsiders are going to be looking at what you have done, and what you are doing, forces you into doing a little better job. There is a discipline factor here ...But I think we behave differently internally, knowing that we have outside directors. The mere existence of outside directors makes us think a little bit harder, makes us organize our thoughts. It sharpens up the whole organization" (p.24, Mace).

> "if a company did not have a board of outside directors, it might be a little bit more free-wheeling, a little bit more careless, and a little bit more lax than it would otherwise be. Knowing that they must appear before, in a sense, their professional peers, and report on what they in management have done, is a healthy thing for management" (p.25, Mace).

Recent empirical research [Weisbach (1988), Warner, Watts and Wruck (1988), Coughlan and Schmidt (1985)] is suggestive of outside directors' monitoring function. There is an inverse relation between a firm's share performance and the likelihood of a subsequent change in management [Weisbach (1988), and Warner, Watts and Wruck(1988)] and share performance measures are more highly correlated with CEO turnover for firms in which outside directors dominate (Weisbach). Moreover, managerial turnover is more likely to be in firms with a low performance record (low Tobin's q ratio) [Morck, Shliefer and Vishny (1989)]. These authors point out that the fact that firms experiencing complete managerial turnover are unlikely to be run by a member of a founding family or by a powerful Boss (an executive who holds one of the key positions in the corporation, Chairman, President, or CEO, and is the sole signer of the letter to shareholders in the annual report) provides further evidence regarding the role of outside directors.

These studies are further supported by anecdotal evidence that boards of directors have recently been actively involved in replacing CEOs at some of the

largest US corporations. Major articles in Fortune (January 11, 1993) and Forbes (January 3, 1994) describe the ouster of more than a dozen CEOs of major corporations. These articles stress the important role that outside directors on the boards of these companies played in these events.

While the empirical evidence presented above provides strong evidence in support of the monitoring role of outside directors it is important to consider other factors that are significant. The inverse relation between share performance and turnover and between turnover and Tobin's q might be due to factors other than the board of directors. There is evidence of large blockholders' involvement in forced CEO departures (Warner, Watts and Wruck) and of creditors' involvement in removing managers in poorly-performing firms [Gilson (1988)].

Notwithstanding the superior monitoring role of outside directors suggested in his interviews, Mace puts more emphasis on directors' guidance function. He believes that the outside directors' primary contributions to the firm are through the prestige they bring to the company and their help in devising long-term strategies, establishing personal relationships and advising the firm from new perspectives. Recent empirical evidence is consistent with the view that guidance has value. Outsiders are more likely to join a board after a firm performs poorly or leaves the industry [Hermalin and Weisbach (1989)], suggesting that new guidance is required as the company shifts its focus. There is also evidence that outside directors play an important role in evaluating bank takeovers [Brickley and James (1987)]. In any case, the guidance and monitoring functions of directors are intertwined and difficult to separate.

Two recent studies [Byrd and Hickman (1992) and Brickley, Coles and Terry (1993)] provide additional evidence in support of the idea that boards are valuable monitors and providers of guidance. Examining 128 tender offer bids from 1980 through 1987, Byrd and Hickman find that firms where over 50% of the board's members are independent directors have significantly higher abnormal returns surrounding the announcement of a takeover bid, than do other firms. Thus, they conclude that shareholders in firms with a majority of independent directors on their boards believe that these directors monitor management decisions on behalf of shareholders and do not let management take on bad takeover attempts. It is also consistent with the view that outsiders provide valuable guidance to managers in formulating a takeover strategy. In any case, the results provide evidence as to the value of independent directors and to their ability to work in shareholders best interests.

Brickley, Coles and Terry (1993) find that the average stock market reaction to the adoption of a poison pill is positive for firms whose boards' have a majority of independent directors and negative for firms whose boards' do not. They also find that the probability that a subsequent contest is associated with an auction is also positively related to the fraction of outside directors on the board. Thus, shareholders believe that if a board, with a majority of independent directors, passes a poison pill amendment, it is in shareholder's best interest. These result are consistent with the results of Byrd and Hickman (1992) and with the idea that outside directors do serve the best interests of shareholders by monitoring management decisions.

Rosenstein and Wyatt (1990) find that the appointment of outside directors is, on average, greeted favorably by the market. While this imputes a positive economic role to outside directors' guidance and/or monitoring function, the evidence is also consistent with the hypothesis that the firm's appointment of an outside director merely signals to the marketplace a change in strategy, having little to do with the outsider's value. Thus, it is unclear which effect is the primary contributor to the markets' reaction.

The research surveyed here provides significant, preliminary evidence with regard to the value of the board of directors as a whole, and of outside directors in particular both as monitors and as providers of guidance. This study adds to this line of research in examining the wealth effects of significant changes to the board of directors, both in terms of the boards composition and in terms of the directors' legal liability.

2.2 THE IMPORTANCE OF DIRECTOR LIABILITY

Managerial misconduct is, to some extent, deterred by the markets for managerial services and directorships. There is some recent evidence on the efficiency of the market for directorships as a disciplining force. Directors who depart from boards of distressed firms hold approximately one third fewer directorships three years after they depart the ailing firm [Gilson (1990)]. Kaplan and Reishus (1990) using dividend cuts to measure performance examine the relation between a firm's performance and the top executives' service on other boards. They find that top executives of companies reducing dividends are approximately 50% less likely to receive outside directorships than are top

executives of companies that do not reduce dividends. Nevertheless, it is unlikely that the market for directors is completely efficient. Williamson (1985) identifies three conditions that must be met for reputation effects to be effective agency cost-containment devices. First, managerial opportunistic behavior must be publicly observable. Second, the deleterious effects of opportunism must be ascertained. Finally, the offenders must be penalized with a *complete* ex-post settling up. These conditions are not easily met and, thus, stockholders must be accorded other avenues for redress. They can either remove the directors and possibly the managers themselves, or sue the directors or managers for inadequate performance.

Stockholders' ability to remove managers and directors is, however, severely limited. This mechanism requires a costly and uncertain proxy fight and the odds of winning are generally slim. Small investors lack the resources or knowledge required to win such a contest, while larger investors might find the option of a tender offer for the firm more attractive. These factors magnify the importance of shareholders' right to sue managers and directors for mismanagement. This option is available to both small and large investors (especially if lawyers work on a contingent-fee basis). Thus, managers and directors are held personally liable for the actions they take, or do not take, as part of their responsibilities to the firm. Shareholders can recover any losses they may have sustained as a result of the firm's mismanagement. Directors and managers that are sued suffer from potential monetary losses and legal costs. They are forced to expend large amounts of time away from their main business and suffer the consequences of such a suit in the market for their services. Thus, the

potential of a law suit can be a powerful tool in realigning managers' and directors' incentives with those of shareholders.

Romano (1991) examines the effects of legal action brought against directors on the internal governance of the firm. He finds that firms whose boards are sued experience a higher turnover of the CEO and Chairman than do other similar firms. In addition, these boards tend to experience greater turnover of directors with the general tendency being an increase in the proportion of outside directors on the post law suit board. This evidence would suggest that internal monitoring goes on as a result of a lawsuit: that board members and management are held accountable for lawsuits. Thus Romano's results support the view that the ability of shareholders to sue directors functions as an alternative method of disciplining directors, thus better aligning them with shareholders.

The dramatic increase in lawsuits brought against management and directors in the 1980s (discussed subsequently), attests to the popularity of this method of disciplining managerial misconduct.

2.3 THE D&O LIABILITY INSURANCE CRISIS – HISTORY

Historically, the legal option of suing managers and directors was limited to cases were shareholders could prove that these agents had acted at least in gross negligence while managing the firm. Proving gross negligence, however, is extremely difficult. The "business judgment rule" was adopted by the courts allowing directors to base their defense on the fact that their decisions were made with good intent, and that faulty decisions resulted from honest mistakes. Courts did not attempt to second-guess directors and officers and they did not seek to

assess whether decisions made by these agents were correct. As one court put it, "In the absence of a showing of bad faith on the part of the directors or of a gross abuse of discretion, the business judgment of the directors will not be interfered with by the courts...The acts of directors are presumably acts taken in good faith and inspired for the best interests of the corporation, and a minority stockholder who challenges their bona fides of purpose has the burden of proof" [Warshaw v. Calhoun, 221 A. 2d 487 (1966)].

The courts limited themselves to determining whether the directors' decisions were made in good faith and with the best interest of shareholders in mind. Proving that directors did not act in good faith or that their decisions constituted willful misconduct thus proved very difficult, explaining why shareholder suits were rare. Thus, until the decade of the 1980s, directors had wide immunity from liability suits, and wide latitude in performing their duties as shareholders' agents.

The situation has changed dramatically in recent years as courts have expanded the meaning of gross negligence to go beyond the business judgment rule. This trend culminated in the case of *Smith Vs. Van Gorkom*. [488 A. 2d 858 (Del 1985)] The court found the board of directors grossly negligent in that the directors had failed to fully inform themselves of "*all material information reasonably available to them*".

Whereas in the past courts had only considered directors and officers liable for "acts of commission", this case extended their liability to "acts of omission". Shareholders could now sue directors and officers for acts they did not take, but *should* have. In this case, the Supreme court of Delaware found the

directors and officers liable for monetary damages, because the board had negotiated a merger without considering all relevant information and without lengthy deliberation. This decision was made even though the merger price was fifty percent above the firm's market price. The director-defendants settled the case for $23.5 million of which only $10 million was covered by D&O liability insurance.

The celebrated Van Gorkom case and other similar cases opened up a Pandora's Box. The period following Van Gorkom saw a deluge in the number of claims against directors and officers. Figure 1 shows the increase in the number of claims filled against a sample of firms surveyed in the Wyatt Directors and Officers Liability Survey - 1988. The number of D&O liability claims rose at an average rate of 25% a year between 1979 and 1987. At the same time the average total cost of a claim more than doubled to $3,048,000. In addition, Korn/Ferry International's Annual (1986) Confidential Survey of Board Practices (survey of the nation's 1000 largest corporations) showed that 16% of the responding companies said that the board of directors had been sued within the last three years [Lewin (1987)].

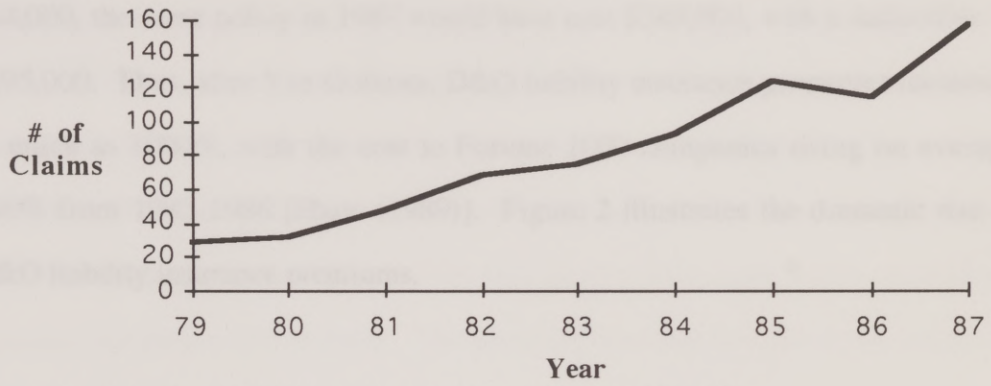

Figure 1: Number of Claims Filed by Year Made (1979-1987).
(Data from the Wyatt Directors and Officers Liability Survey - 1988)

Director liability, while it deters acts of negligence, also has a potential negative effect. Directors cognizant of the risk to their personal wealth, if they agree to serve as directors at all, become cautious in their decision-making. An over-defensive, risk-averse director is not in shareholders' best interest. To partially protect directors from the consequences of being sued firms typically purchase D&O liability insurance for them. While D&O liability insurance reduces the monetary threat it does not totally eliminate it because most D&O liability insurance policies include a deductible, payable by the director. In addition, the director still suffers from the other consequences of being sued, such as loss of time and reputation. In the Wyatt survey 73% of all firms, and 92% of publicly traded corporations, purchased D&O liability insurance.

Prior to 1984 D&O insurance was widely available at reasonable rates, limits and deductibles. However, since then, the rates and the level of deductibles

required increased dramatically, while the limits decreased. For example, according to Cottingham (1988), whereas in 1984 a D&O policy with some $16 million of coverage cost approximately $19,000, with a total deductible of $44,000, the same policy in 1987 would have cost $243,000, with a deductible of $295,000. Thus, after Van Gorkom, D&O liability insurance premiums increased as much as 1000%, with the cost to Fortune 1000 companies rising on average 506% from 1985-1986 [Shaw (1989)]. Figure 2 illustrates the dramatic rise in D&O liability insurance premiums.

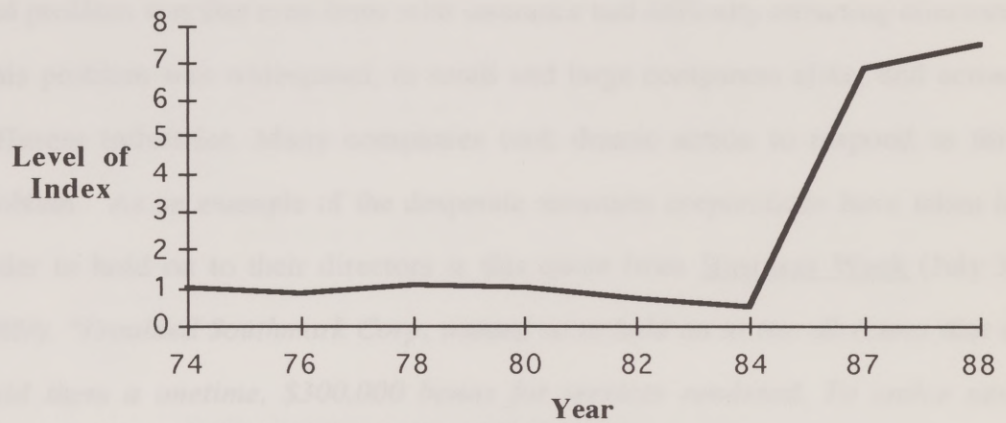

Figure 2: Wyatt D&O Premium Index (1974-1988).
(Data from the Wyatt Directors and Officers Liability Survey - 1988. The index accounts for additional variables such as corporate size, policy limits, and deductibles, in calculating the premium index. Rates for 1974 are used as the base of 1.0.

This steep rise in premiums resulted from the steep increase in lawsuits and losses as well as increase in the legal uncertainty following the Van Gorkom case. This made it impossible for many firms to purchase D&O liability

insurance. Many insurance companies either refused to insure firms or dramatically increased the premiums and deductibles while increasing the number of exclusions so that they provided little coverage, thus making these policies very unattractive to many firms [Doyle (1991)].

The dramatic rise in the level of lawsuit settlements coupled with the firms' inability to provide them insurance led directors, not surprisingly, to resign their posts and refuse to serve as directors. Continental Steel, for example, lost 8 of 12 directors between 1985 and 1988 (see chapter 4 for more details on director resignations during this period). The personal financial risk directors faced had exceeded the financial and other benefits associated with serving on the board.

These resignations, however, were only the tip of the crisis iceberg. The real problem was that even firms with insurance had difficulty attracting directors. This problem was widespread, in small and large companies alike, and across different industries. Many companies took drastic action to respond to this problem. As an example of the desperate measures corporations have taken in order to hold on to their directors is this quote from Business Week (July 3, 1989): *"Troubled Southmark Corp. wanted so to hold on to two directors that it paid them a onetime, $300,000 bonus for services rendered. To entice new directors, it offers a $50,000 "sign on" bonus and $50,000 in pay."* A cover story in Business Week (September 8, 1986) dramatized the crisis as did a Wall Street Journal article from February 5, 1986 titled "Hot Seats: Board Members Draw Fire and Some Think Twice About Serving", by A. Bennett. A recent corporate finance textbook [Rao (1992), chapter 21 on Corporate Governance] addresses the problems faced by firms in attracting outside directors. Anecdotal evidence of

these problems is extensive and a few excerpts are illustrative of the widespread concern:

> "*I'm afraid we're going back to having more inside directors because outsiders are afraid to serve*" [John Nash, president of the National Association of Corporate Directors, quoted in R. Behar and M. Clifford, "Kibitzing from the Boardroom", Forbes, February 10, 1986].
>
> "*There's an air of desperation...Directors are resigning and refusing to serve on boards*" (L. Parks, assistant to the president, Contran Corporation, quoted in "Risky businesses: Corporate Directors Bail Out", ABA Journal, June 1, 1986).
>
> "*One result of the increases in liability is that " it's very , very difficult to get someone with experience" to sit on boards of directors*" [Marshall Manley, of a law firm in California and president of Home Group, which owns Home Insurance Co., quoted in "Corporate Boardroom Woes Grow", The National Law Journal, August 4, 1986].
>
> "*More and more, outside directors are an endangered species. The people the boards want don't want to serve on any more boards. And it appears that, when there is a vacancy, if the company can't get the person it wants, it may leave the seat unfilled*" [Business and the Law, Tamar Lewin, New York Times, Jan 13, 1987].
>
> "*As insurance becomes less and less available on reasonable terms, qualified outside directors in increasing numbers are refusing to serve without adequate insulation from personal liability*" [The Business Lawyer, Update, July/Aug 1986].
>
> "*Some companies, especially in troubled industries such as banking and oil and gas, have lost outside directors who were unwilling to expose their personal fortunes to shareholder suits*" ["Companies ask Holders to Limit Board Liability", Cynthia Crossen, Wall Street Journal, 10/7/86].
>
> "*Concerned about increasing legal hassles and time demands, scores of directors are quietly stepping down. Some prominent executives confide that when their terms expire, they will not stand for reelection to outside boards*" ['The Job Nobody Wants", Business Week, Sept 8, 1986].

The direct evidence from surveys is even more illustrative. A 1986 survey of 596 CEOs by the CEO/Peat Marwick Panel on D&O Liability ["Directors' and Officers' Liability: A Crisis in the Making", 1987, Peat Marwick Main & Co.] indicates that 95% of the CEOs believe that there is an incipient crisis; 43% believed that the situation had already reached crisis proportions. The survey also reports that of the 709 responses received from a poll of 2,765 bank presidents, 91%, a strong consensus, believed that there was a D &O crisis in the making. Only 6% said that the issue was overblown and that there was no crisis. Even stronger evidence is contained in Korn /Ferry International's 1986 Report which begins: "*This has been a very difficult year for directors. Based on the results of our Thirteenth Annual Board of Directors Study, we think that corporations are going to find it much harder to attract and retain qualified directors than they do today*." 60% of the companies in this national survey believed that recent court decisions inhibited the company's ability to attract new directors; 34% said recent court decisions would hurt them in retaining existing directors; 61% believed that the (then) current emphasis on director liability was not a temporary phenomenon; 96% of CEOs said they would limit the number of directorships they will hold because of the increased liability; 52% of companies reported that the sharp rise in D&O liability premiums will make it more difficult to recruit high-level outside directors.

Finally, companies reported that one out of five qualified candidates turned down an invitation to serve on the board. Korn/Ferry's Fourteenth Annual Study (1987) (a survey of 1000 companies which included the Fortune 500, Fortune 100 major service companies, Fortune 50 major banking institutions, 50

major insurance companies, 50 major diversified financial companies, 50 major retailers, 50 major transportation companies, and 150 selected smaller companies; 71.3% of NYSE companies) points out that while no prospective director offered increasing legal liability as a reason for declining an invitation to serve on a board in 1982, the number rose to 2.5% in 1985 and to 14.2% in 1986. Moreover, 71% of Chairmen surveyed believed that they had problems in attracting outside directors. As a consequence, many firms downsized their boards because of difficulties in finding outside directors (see "A Good Director is getting Harder to Find," Wall Street Journal, February 9, 1988).

If directors, especially outside directors, are important in protecting shareholders' interests in the day-to-day management of the firm it is in shareholders' best interest to find a balance between their rights to hold directors liable for their actions on the one hand and the need for attracting qualified directors on the other. This balance can allow directors to fully utilize their expertise and entrepreneurial skills, allowing them to take on risks when and if necessary, while at the same time providing them with the right incentives to work in the shareholders' best interests.

2.4 Research Potential

While there is much anecdotal evidence that a directors liability crisis occurred, there is not scientific or empirical validation of this crisis. This dissertation provides a more rigorous, empirical analysis of whether such a crisis did indeed occur. An answer to this question could shed light on several other interesting issues: If a crisis did occur then what is the effect of changes in

liability rules on firm behavior and firm value? Was the political response, and the governance changes that resulted, positive or negative to firm value? Did all firms respond in the same way or did some firms suffer or benefit more from the crisis than others?

If a crisis did indeed occur and directors were resigning on the one hand and difficult to replace on the other, then this period presents a unique opportunity to evaluate the value of outside directors' more directly than previously done. In addition, the elimination of directors liability that was introduced in order to combat the alleged crisis also presents an interesting event that can be analyzed in terms of the value placed by shareholders on outside directors. These issues will be pursued in chapters 4 and 5.

Chapter 3: Directors Role in Financial Distress and the Liability Crisis

3.1 The Role of Directors in Poorly Performing Firms

As the discussion in Chapter 2 suggests, theoretical arguments have been made on both sides of the debate regarding the effectiveness of the board of directors. Empirical evidence does however suggest, that in times of major decision making (takeover, merger, poison pill) shareholders are more confident in the firm's actions when outsiders have a significant presence on the board of directors [Brickley, Coles & Terry (1993) and Byrd & Hickman (1992)]. This might suggest that the board, and primarily its outside members are especially valuable during events of strategic importance. Poor financial performance, that increases the probability of financial distress and possibly bankruptcy should, therefore, also be a time where outside directors play an important role.

Evidence that directors behave differently in times of crisis is contained in the Lorsch & MacIver study, perhaps the most comprehensive analysis of corporate governance to date. These authors interviewed nearly 100 outside directors over a three year period and received questionnaires from over 2000. A key finding is that whereas directors generally play a passive role deferring to the decisions of the CEO, they become actively involved in decision-making when the firm is in a crisis. The generally inactive board is transformed into a proactive body when the firm is in some form of distress. For example, directors are more likely to confront the CEO at board meetings on matters relating to poor financial performance data, problems with debt service and difficulties in refinancing. To

dramatize this finding Lorsch-MacIver quote a director: "*Directors are like firemen. They sit around doing very little until there is a fire alarm and then they spring into action.*"

The evidence from Lorsch and MacIver, combined with the evidence reviewed in Chapter 2, suggests that in firms approaching financial distress directors become more active and more valuable to shareholders. Of course, one could legitimately claim that shareholders will not trust the directors that allowed the firm to reach financial distress. Indeed, Hermalin and Weisbach (1988) find that in firms performing poorly inside directors are replaced by new outside directors. Thus, new specialists are recruited to help the firm get out of its troubles. Chapter 4 analyses the markets response to changes in board composition for healthy and financially distressed firms.

Because of the position a firm is in when it approaches financial distress, and because of the legal constraints it will face in bankruptcy, outside directors may play a "strategic role" in poorly performing firms, a role that adds to the traditional view that outside directors perform guidance and monitoring functions.

If outside directors in a poorly performing firm resign, the firm may lose its right to elect new directors if it becomes insolvent; the court can appoint its own choices [as in re Johns-Mansville Corp., 801 F 2nd. 60, 65 n.6 (2nd Circuit 1986). See Davis et. al. (1991) for other examples]. A distressed (pre-bankruptcy) firm has incentives to avoid this possibility. In addition, outside directors on boards of distressed companies may make it easier for these companies to sell the

firm or privately refinance it, thereby avoiding the costs associated with bankruptcy.

Because of exchange rules, audit committees are made up solely of outside directors for all NYSE and most other exchange firms. In addition, some stock exchange self-regulatory organizations envision a special role for audit committees in financial distress situations. One example of this increased role is in the context of selling control of the company without shareholder vote. Under the Revlon case [Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc., Del. 1986] directors must have enough information to conclude that a transaction is in the best interests of the stockholders considering the other options available. However, for a financially distressed firm, an immediate cash infusion may be crucial for survival and there may be no time to obtain a stockholders' vote. For example, a potential acquirer offers to provide the necessary liquidity in return for a majority of the company's voting stock if the deal will be consummated within a few days. In this situation, the audit committee may appeal to the NYSE for an exception to the rule and go ahead without a stockholder vote. Thus, the outside directors on the audit committee may be able to "save" a company in deep financial distress. It would be interesting to examine whether this added flexibility has any role in explaining why low Tobin's q firms are more often the targets of takeovers.

In addition, it may be advantageous for a firm in distress to have outside directors with minimal ownership in the firm make decisions regarding employment terminations. Delikat (1991) points to the increasing trend that individuals making discrimination claims "personalize" their claims by joining

directors with employers. By making a director a target for a potential lawsuit the claimant can avoid the possibility that all litigation will be stayed because the firm subsequently files for bankruptcy protection. In a related labor matter, the court [in Trustees of the Amalgamated Insurance Fund v. Danin] found that personal liability should be imposed on directors with significant ownership interest. Outside directors without substantial interest in the financially distressed company may thus be better off making these potentially litigious decisions that are likely to arise with greater frequency in poorly performing firms.

These examples suggest that outside directors may play a vital "strategic" role in poorly performing firms.

3.1 THE POTENTIAL EFFECTS OF THE DIRECTOR LIABILITY CRISIS ON DIRECTORS OF FINANCIALLY DISTRESSED FIRMS

Because of their increased role in managing the firm, and their increased exposure to value changing decisions, the potential legal liability of directors increases as the firm approaches financial distress. Firms which are doing poorly are more likely to be sued, and to lose the law suit since shareholders have proof of their losses. Thus, the cost of serving on a corporate board increases as the probability of financial distress increases.

In addition, directors' roles and responsibilities change when the firm is in distress, in ways that are not yet fully understood. There is a growing awareness that financial distress poses special challenges to managers and directors. Normally, firms operate under the general principles of corporate law of the relevant state. However, portions of state law are superseded by Federal

bankruptcy laws and even many state laws have provisions to accommodate provisions of the Bankruptcy Code.

Because insolvency alters the rules and regulations governing board decisions, traditional governance principles do not necessarily apply. Traditionally the courts have held that the directors' responsibility are to the stockholders. Even in states that have adopted broader "constituency laws", courts have maintained that a board of directors "may have regard to other constituencies" but only if there are "rationally related benefits to shareholders". However, in distress, directors may owe fiduciary duties to creditors as well as, and sometimes, instead of, to stockholders. In Clarkson Co. Ltd. vs Shaheen [660 F. 2d. at 512] the 2nd U.S. Circuit Court of Appeals concluded that directors' duties to creditors arose once the company was "insolvent." This "duty-reversal" in complicated by the fact that because the courts have not defined "insolvency" precisely [Brown (1991), Varallo and Finkelstein (1992) and Coffee (1992)] directors may not know exactly when their duty shifts away from stockholders and on to creditors [Davis et.al. (1991)].

Although several issues regarding the nature of directors' fiduciary duties still remain unclear, Brown (1991) points out that most of the cases in which directors owe fiduciary duties to creditors either involve companies that have since failed or are hopelessly insolvent or involve allegations of self-dealing by the directors. To the extent that outside directors can reduce these problems, they may serve to retain the status quo of the firm's extant governance structure by obviating directors' potential responsibilities to constituencies other than the

stockholders. In any case these court rulings allow creditors greater opportunity to impose personal liability upon directors.

Possibly even more troubling for directors is the fact that if a company indemnifies them and the firm then files bankruptcy, a their indemnification claim against the firm may be treated exactly as that of an unsecured creditor's claim.

The increased personal risk from corporate decision-making coupled with the increased ambiguity in directors' duties in poorly performing firms, combined with the increased liability associated with the litigation of the mid-1980s (Chapter 2) had the potential to paralyze the board and hurt the firm just as the board was needed most. With their changing roles and responsibilities taking no action whatsoever was a safer course of action for directors; inaction minimized the threat of personal liability. It is harder to prove that inaction caused harm than to prove that a specific action did.

Thus, the liability crisis had the potential of harming poorly performing firms more than other firms in that it brought a paralysis to boards' of firms that could least afford it. Therefore, these firms would be the ones most likely to benefit from the elimination of the crisis and the protection of directors. For firms in financial distress eliminating the directors' increased liability would demobilize the directors into action, improve the dynamics of the board (e.g., foster greater participation and active monitoring) and thereby benefit the firm. In firms that are doing well and that are not facing a crisis situation, theory would suggest that directors are less actively involved in the managing and monitoring of the firm. Therefore one would expect that they where less effected by the liability crisis that where financially distressed firms. Chapter 5 presents an empirical test of

this idea by examining the markets reaction to the elimination of director liability (that, at least at the time, was viewed as bringing an end to the crisis) for both poorly performing and healthy firms.

Chapter 4: Director Resignations – Evidence for The Directors Liability Crisis

4.1 Introduction

As discussed in the previous chapters, extensive casual evidence exists as to the occurrence of a director liability crisis between 1984 and 1987. However, no direct empirical evidence documents the existence of a crisis. In this chapter evidence regarding the market reaction to directors' resignation before and after the supposed crisis will be analyzed. Hypotheses are presented as to the expected effect of a crisis on shareholders response to these resignations. It is thus hoped that evidence will be uncovered as to the validity of the "crisis" idea.

In addition to issues relating to the question of the liability crisis, this study addresses the question of whether changes in the composition of the board of directors have any effect of the value of the firm. Because of the perceived dramatic nature of the directors and officers liability crisis and the changes in corporate governance that resulted from it, the period between 1984 and 1987 is especially apt to studies on the effect of changes in the board of directors.

The question of whether the resignation of directors impacts firm value has not been addressed in the literature. This study investigates this issue during the liability crisis and following it. Thus, questions regarding the relevant importance of directors in general and outside directors in particular are addressed.

Evidence to suggest that there is a significant difference in shareholders' response to directors' resignations during and after the crisis is presented. During

the crisis, shareholders view director resignations as a significantly negative event, while in the period after the crisis these resignations do not negatively impact shareholders wealth. These results provide evidence consistent with the idea that a directors crisis did indeed occur. In addition, evidence is presented that suggests that outside directors are especially valuable to poorly performing firms, and that when they cannot be replaced, their resignation is viewed as significantly negative by shareholders. These results are confirmed while controlling for a variety of firm specific characteristics.

Section 4.2 discusses the significance of the event studied: the resignation of directors. Section 4.3 develops the hypotheses regarding shareholders response to these resignations. The data collection method, descriptive statistics and methodology are discussed in section 4.4. Results for the various tests are presented in section 4.5. Section 4.6 concludes the discussion with a summary and closing remarks.

4.2 THE SIGNIFICANCE OF DIRECTOR RESIGNATIONS

Much research has been devoted to the valuation effects of the resignations of CEOs and other managers. On the other hand the resignation of a member of the board of directors, if he is not the CEO, President, or Chairman, very rarely gets publicized. Thus, little if any research has been devoted to the measurement of possible valuation effects that result from the resignations of directors. Part of the reason for this neglect is the view that directors, as individuals, play an insignificant role in the functioning of the corporation; that

they are puppets in the hands of a strong CEO. For this reason, changes in board composition are probably considered to have no or negligible economic effects.

It is also true that changes in board composition can occur frequently as directors retire, change jobs, or with changes in ownership or management of the firm. One would not expect these normal changes in the board to have significant valuation effects – directors can be easily and relatively costlessly replaced.

An additional possible reason for the little attention resignations of directors have received in the finance literature is the fact that even for resignations of CEOs few conclusive empirical results have been arrived at. Depending on the circumstances surrounding a CEO's resignation, shareholders response has been documented to be significantly positive in financially distressed firms [Bonnier and Bruner (1989)], and in firms where managers are dismissed [Furtado and Rozeff (1987)]. Alternatively, for large samples, researchers have found insignificant shareholder response [Warner, Watts and Wruck (1988), Weisbach (1988), Reinganum (1985)]. And in one case [Sant (1988)], a significant negative response has been documented. Thus, even for a major resignation event, such as the resignation of a CEO, the results are hard to explain.

As Jensen and Warner (1988) note, there are two effects captured by abnormal returns surrounding the announcement of management changes; an information effect and a real effect. If the resignations convey to the market that the firm is doing worse than expected, one would expect a negative response as a result of this information effect. On the other hand, the real effect could be positive if the changes in management are in shareholders' best interest. If the

firm is doing poorly one would expect shareholders to view managerial turnover as positive, i.e., replace the managers that created the firm's problems with new ones who might be able to solve them.

These effects should, to some extent, exist when directors resign from the board. However, when a single director resigns, one would expect both these effects to be negligible. In this study, the announced resignations of at least two directors are examined because such an announcement has imbedded in it a more significant informational and real effect. The expectation is that under normal circumstances shareholders will respond to meaningful director resignations approximately the same as they would to the resignation of a CEO. If the firm is performing poorly, directors share the responsibility for the performance with the managers. Thus, in such firms shareholders would view the replacement of directors as positive, as long as new qualified directors could be found as replacements. On the other hand, the resignations could convey to shareholders negative information regarding the firm and thus causing shareholders to react negatively to the announcement.

In order to control for the information effect Bonnier and Bruner (1989) study poorly performing firms with the assumption that the negative information regarding these firms is already incorporated in prices so that a CEO's resignation will not convey any significant additional information. They thus find positive returns associated with the CEO resignation. In this chapter, director resignations are studied in a similar way; firm performance is controlled for in determining shareholders' response to the resignations. The purpose is to capture the real effect of these resignations.

Directors resign from boards for a variety of reasons; personal, disagreement with other directors or management, changes in ownership or management, restructuring of the board, and others. During the liability crisis, another motivation for directors to resign was introduced – the fear of legal liability.

The uniqueness of the liability crisis period is in the fact that there is reason to believe that during this period corporations had difficulties attracting new directors to their boards. Thus, a directors resignation, even for trivial reasons, could have a lasting effect on the composition of the board.

These circumstances allow for an analysis of the value of the outside directors on the board. If a outside director cannot be replaced easily, then the resignation of a director has additional significance. Shareholders are valuing the net loss of a director, not his replacement. Thus, the real effect would not be the effect of replacement but the effect of the possibility that the firm will have to do without an outside replacement. As a result, shareholders reaction, assuming they value the presence of outside directors on their board, will be negative, where it might, under normal circumstances, be positive.

As discussed in Chapter 3, the role of directors changes when firms are financially distressed. In normal times one would expect shareholders of poorly performing firms to favor replacing the board of directors who brought the company to its weak financial position. However, when new qualified directors are hard to find the question becomes; are these directors better than no directors or unqualified directors.

Firms that are poor performers are more likely to be sued and more likely to lose their lawsuits. Thus, directors of poorly performing are more likely to leave the board in order to escape the possible consequences of legal action. One would expect this to be especially true during the liability crisis when directors found themselves with weakening legal and insurance protection and a large increase in the number law suits. However, as discussed in Chapter 3 the roles and responsibilities of directors in poorly performing firms are significantly changed and expanded as the firm approaches financial distress. Thus, this is an especially bad time for these firms to be without qualified directors. Under normal conditions, where directors are reasonably protected from lawsuits, qualified individuals might view joining a distressed firm's board as a professional challenge. Thus, under such conditions replacing directors in such firms would be a normal event with no negative impact on the firm. However, during the director liability crisis, it is possible that the incentive of a challenge was outweighed by the potential expense of a lawsuit, thus reducing the supply of qualified directors who would agree to serve on the boards of poorly performing firms. This left firms with limited access to outside directors. Since outside directors seem to play an important role in such firms, the inability to replace the resigning directors could have a negative impact on the firms ability to function in shareholders best interests as it approaches distress.

This discussion leads to testable hypotheses that are discussed in the next section.

4.3 HYPOTHESES

As discussed above, if a liability crisis did occur, we would expect the availability of directors to be curtailed. Under such circumstances, when directors resign, shareholders cannot assume that they can be replaced easily. This is especially true if the directors resign from firms that lose their D&O liability insurance, thus leaving any new directors that might join the board, unprotected. If having a board of directors with outsiders as members is of value, then one would expect that shareholders would respond negatively to the announced resignation of directors. On the other hand, if the liability crisis did not occur, or if it did not manifest itself in a shortage of qualified directors, then it is ambiguous what, in aggregate, shareholder's response should be. If there is informational content in the resignation, then shareholders might respond negatively. Alternatively, if directors are being replaced for various non information reasons there can be either no response or a positive response. Thus, if only a sample of resignations that occur during the crisis is studied, we cannot separate between the effect of the resignation and the effect the crisis had on shareholders response to the resignations.

By using a sample of resignations that occurred after the liability crisis, the effect of the crisis itself can be isolated. If there is no difference in the response of shareholders during and after the crisis years, then it is likely that the "crisis" as reported in the popular press did not occur. However, if a difference in response is found to exist, it can be interpreted in terms of the crisis. The fact that two

periods, that are potentially different in terms of the protection offered directors, can be analyzed enriches the results and their interpretation.

If a crisis did indeed exist, and if directors are valuable, a negative shareholder response to directors' resignations would be expected across all firms. This response should be especially acute among poorly performing firms who have a greater need for qualified directors and for whom the crisis made it more difficult to attract these individuals. The effect of the crisis on poorly performing firms would probably dominate any real effects suggested by Jensen and Warner (1988) since the real effect assumes that incompetent directors can be replaced by more qualified personnel. However, if the crisis indeed occurred then this replacement would not be obviously possible. The liability crisis, by increasing the costs associated with serving on the board of a poorly performing firm, reduced the available pool of qualified directors to the point where many firms could not replace their directors without incurring significant costs. Thus, poorly performing firms should have suffered more as a result of the crisis than did firms who were doing well and could probably find new directors to replace those who had resigned.

It is difficult to construct a viable hypothesis regarding the average shareholders' response to the resignations of directors during the non crisis years. For this period the information and real effects work in opposite directions so that with the aggregate data a prediction for the overall reaction cannot be made. However, by controlling for firm performance, thus reducing the impact of the informational effect [see Bonnier and Bruner (1989)], the real effect becomes more evident. For poor performing firms the informational effect is of little

significance because the market already knows that the firm is doing poorly. Thus, shareholders reaction to directors resignations in such firms should be evidence of the real effect of these resignations. If in the post crisis years the resigning directors can be easily replaced, then one would expect shareholders in poorly performing firms to react positively to changes in the board's composition. The directors that brought the firm to its poor condition are being replaced.

For firms that are doing well, in non crisis years, the resignation of directors could have informational content regarding those directors assessment of future firm performance. For these firms the informational effect might convey bad information and is difficult to separate from the real effect that might have a positive valuation effect. Thus, for healthy firms in non crisis years one would expect a less positive response than for poorly performing firms of that same period.

If the crisis did indeed occur then one would expect the following predictions to come true:

1. During the crisis years shareholders will, on average, respond negatively to directors' resignations, while in non crisis years the average response, while difficult to predict, is expected to be non-negative.
2. During the crisis shareholders will react more negatively to the directors' resignations from poorly performing firms than from other firms.
3. After the crisis shareholders in poorly performing firms will react more positively to directors' resignations than shareholders of other firms.

4.4 DATA & METHODOLOGY

4.4.1 Identification of Firms

Directors regularly depart from boards for various reasons, many of them personal. In an attempt to find those firms where the resignation of directors conveyed meaningful information, the sample is limited to firms where at least two directors resigned. Thus, to be included in the sample, the resignation of two or more directors from a firm must have been announced at the same time

In order to capture the effect of the departure of outside directors, of the two resigning directors at least one had to be an outsider. To identify firms with such occurrences, a text search was conducted on various databases available through the Lexis/Nexis database. If it was unclear from the news announcement if a director was an outside director, proxy statements were consulted. The search was limited to the period of 1984 to 1990. 109 firms were identified.

The announcements of directors' resignations were found in several sources, primarily over the business wire services. These news services, as well as the major newspapers were scanned for possibly related news events surrounding the resignations.

In order to perform the analysis required, return data as well as performance data was required for each firm. For 10 of the firms no return data was available from CRSP for the dates surrounding the resignations. For 13 firms no performance data from COMPUSTAT was available for the years preceding the resignations. Thus, the final sample includes 86 firms.

4.4.2 Time Frame

The sample was constructed in order to include the period of the crisis and the period following it. As discussed above, the period of the liability crisis is believed to have begun during 1984 and continued into 1987. During 1987 the crisis was mitigated somewhat by the introduction of various state laws limiting director liability. These laws will be discussed in detail in chapter 5. To capture resignations of directors during and after the crisis, the sample includes firms in which directors resigned during the period from 1984 to 1990.

In order to test shareholders' reaction to director resignations during and after the liability crisis period, firms are examined in these two periods. For the purpose of analysis, the sample is divided into two primary portfolios: one including all resignations that occurred during the 1984 to 1986 period, and the other including all the resignations that occurred during the 1988 to 1990 period. The 1984-1986 and 1988-1990 portfolios include 41 and 37 firms respectively. The sample from 1987 is dropped in most of the portfolio comparisons because it is somewhat ambiguous whether this period can still be considered part of the crisis years or not. It is likely that this depends on the firm's state of incorporation since different states enacted amendments eliminating director liability at different times. In addition, investors' expectations during 1987, regarding the availability of directors, could have been influenced by the increased legislative activity that was aimed at mitigating the problem. For this reason, resignations that occurred in 1987 are not included in most of the portfolio comparisons, but are included in the cross sectional regressions.

4.4.3 Descriptive Statistics of Sample

4.4.3.1 Resignations and Board Composition

Resignations of at least two directors, one of which is an outsider, are identified for the purpose of this study. In addition, information about the appointment of directors within a three day window of the resignations is also tracked. A three day window was chosen because after this time frame information regarding many of these companies becomes very scarce. The focus here is on the ability or importance of replacing these directors immediately.

Panel A in Table 4.1 presents a breakdown of the number of resignations and appointments for the total sample; the average number of resignations is 3.4 and of appointments 1.3.

Panel B in Table 4.1 presents the number of resignations and appointments by year. During the period of the liability crisis (1984-1986) there are a larger number of resignations and a smaller number of immediate appointments than in the period following the crisis. On average, during 1984-1986 period 3.8 directors resigned and 1.1 were appointed as compared to 3.081 and 1.6 respectively for the 1988-1990 period. Panel C in Table 4.1 documents the statistical difference in these values between the two periods. The number of resignations in the crisis years is only marginally significantly different than those in the post crisis period. However, the difference between the number of directors resigning and being appointed is significantly larger for the 1984-1986 sample than for the 1988-1990 period. In addition, the ratio of directors appointed to resigning is significantly smaller for the crisis years. Statistical significance is

determined using a standard t-Test, a Mann-Whitney sign test an a Kolmogorov-Smirnoff non parametric test.

The significant difference in the net change in directors (resignations minus appointments) provides preliminary evidence with regard to the liability crisis. If directors were difficult to recruit, or if there was uncertainty regarding the availability of directors, it would be less likely that directors could be replaced immediately after the announced resignation. Thus, the fact that during the crisis years firms did not replace directors as quickly as they did in the years following the crisis is evidence in support of the idea that a crisis did indeed occur.

The impact of directors' resignations could be influenced by the composition of the board from which they are resigning. Panel A in Table 4.2 presents statistics regarding the average board composition before the resignations and information regarding the percentage of outside directors that resigned. Average board size for the total sample is 8.8 with 57.7% of these directors being outside directors. Of the outside directors on the board, on average, 63% resigned.

Panel B in Table 4.2 presents statistics regarding the average board composition before the resignations and the percentage of outside directors that resigned for each of the sample years. The statistics for outside directors on the board and those resigning look very similar for both the crisis and the post crisis periods. Indeed, Panel C provides evidence that there is no significant difference between the two samples except for the fact that the size of the boards of directors during the crisis appears to be larger (marginally statistically significant) than the boards of firms after the crisis. The larger board could be associated with the fact

that firms in the 1984 to 1986 sample are larger than those in the 1988-1990 sample (see section 4.4.3.2). Since the composition of the boards of directors is very similar, whatever differences there may be in shareholders' responses to these resignations are probably not due to differences in board composition between the two samples.

4.4.3.2 Performance

In order to capture both the market's estimation of firm performance and the historical performance of these firms, three measures of firm performance are used; one market based measure and two accounting measures. As a market measure of performance the firms market value of equity plus the book value of long term debt and preferred stock, divided by the firm's book value of assets is used. While this is potentially a weak proxy for Tobin's q [Perfect & Wiles (1993)] more accurate estimates are especially difficult considering the variety of industries in which the firms in this sample operate. This variable captures the market's estimation of the firm's potential for rents, i.e., the ability of the firm to use the assets it posses to generate economic rents in the future. Firms that are poorly managed, or whose assets are not capable of generating such rents, will have a market value to total assets ratio of less than one. These firms are believed by the market to be poorly performing with little prospects for the future. Alternatively, firms whose ratio is greater than one are believed to have positive opportunities for future profits. Thus, this performance variable is a forward-looking measure.

Two accounting measures are used. The first, operating profits to total assets, adjusted for industry by subtracting the mean value for the corresponding two-digit SIC code for the firm's industry, is a measure of the firm's current operating performance. Since a firm's performance is often evaluated in comparison to the performance of similar firms, the industry adjustment is made in order to control for possible industry-wide effects. The operating performance measure is calculated for the two years preceding the resignations. The differences in performance between the two years are also used in the regression analysis in Section 4.5.

As an alternative specification of performance, we employ the operating performance measure used by DeAngelo and DeAngelo (1990). Firms with 5 years of positive "bottom line" income and pre-tax operating income are considered firms with high operating performance (HOP). Firms with three years of negative net "bottom line" income or negative pre-tax operating income during the five years preceding the proxy year are defined as firms with low operating performance (LOP). A net "bottom line" loss occurs when Compustat Item 18 (income before extraordinary items and discontinued operations) plus Item 48 (extraordinary items and discontinued operations) is less than zero. A pre-tax operating loss exists when Item 13 (operating income before depreciation) minus item 14 (depreciation expense) is less than zero.

Information required to derive these performance measures and information on the size of the firms in our sample are available from COMPUSTAT.

Panels A and B in Table 4.3 presents summary performance and size statistics for the total sample and for the sub-samples divided by year. Panel C presents a comparison of the performance and size of the firms in the two samples: 1984-1986 and 1988-1990. The mean size of all firms in the sample, as measured by total assets, is $639 million with a median of $90 million. Across the different years, 1985 is the only period in which it seems that the size of firms is significantly different than the other years. However, this is primarily a result of a small number of very large firms since the median is similar to those for the other periods ($101.4 million). The firms in the portfolio with resignations during 1984-1986 are significantly larger than those with resignations in the 1988-1990 period (mean difference of $542 million). Thus, resignations of more than one director at the same time occurred in larger firms during the crisis than following it.

The market value to total assets ratio is below 1.0 for all periods except 1987, which means that this sample is one of mostly poorly performing firms. In addition, there is no statistically significant difference between the crisis years sample and the sample of firms from the post crisis years. The low values for this variable suggest that the sample is of firms with relatively weak performance. In support of this is the fact that for all years except 1987, the ratio of operating income to total assets, adjusted for industry, is negative. Thus, the firms in these samples underperform their industry. The difference in operating performance between the crisis and post crisis samples is not statistically significant.

The 1984-1986 sample has a larger number of high operating performance firms (7) and smaller number of low operating firms (13) than does the 1988-1990

sample (4, 19 respectively). However, these differences are not statistically significant. Overall, prior to the resignations, the crisis and post crisis samples are statistically similar in terms of all the performance measures used.

4.4.4 Methodology

In order to determine shareholders' reaction to the resignation of directors, an event study is conducted. We use the event study results for three purposes:

i) to determine the abnormal return over the total sample,

ii) to determine the abnormal returns on a number of portfolios segmented by various variables such as year of resignation, reason for resignation and firm performance,

iii) to produce firm-specific cumulative abnormal returns (CARs) and cumulative standardized prediction errors (CSPEs) for use in cross-sectional regressions.

The date of the first public announcement of the directors' resignations is used as our event date. A period of 3 days following the event-date is chosen as the event -window and abnormal returns for this period are estimated. If no other information is revealed to the public on the event date, then the null hypothesis is that no abnormal market reaction will occur. Using an estimation period of 150 days prior to the event we estimate, using OLS, a market model that is specified as:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it}$$

where:

R_{it} = the return on security i at date t

α_i = the regression intercept

β_i = the beta coefficient (slope) of the regression

R_{mt}= the return on the value-weighted CRSP index

e_{it} = the error term for the regression on security i at date t

The estimates of α and β are used to calculate the expected return during the event window for each firm. The difference between these calculated returns and the actual returns for security i at date t are defined as the abnormal returns (AR_{it}). In equation form, these abnormal returns are:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$$

These returns are aggregated for each firm to provide firm-specific CARs that are later used in the cross-sectional regressions:

$$CAR_i = \sum_{t=T1}^{T2} AR_{it}$$

where T1 and T2 are the beginning and ending event-day in the event window. Following Dodd and Warner [1983] these returns are standardized by the square root of their estimated forecast variance, thus forming a standardized prediction error, SPE_{it}, equal to

$$SPE_{it} = \frac{AR_{it}}{s_{it}}$$

where

$$s_{it} = \left\{ s_i^2 \left[1 + \frac{1}{L_i} + \frac{(R_{mt} - \overline{R_m})^2}{\sum_{i=1} (R_{mt} - \overline{R_m})^2} \right] \right\}^{0.5}$$

s_i^2 = the estimated residual variance from the market model regression for security i.

L_i = Days used for the regression.

The cumulative standardized prediction error (CSPE) for each firm is a z-statistic, and is defined as:

$$CSPE_i = \sum_{t=T1}^{T2} \frac{SPE_{it}}{\sqrt{T2-T1+1}}$$

To this point, returns and prediction errors are generated for use in the cross-sectional regressions .

In order to determine the aggregate response to the event, the average abnormal return $\overline{AR_{it}}$ for day t across all N firms tested is calculated:

$$\overline{AR_t} = \frac{1}{N}\sum_{t=1}^{N} AR_{it}$$

The $\overline{AR_{it}}$ provides us with the average abnormal return for each day within the event-window. The null hypothesis tested is that the $\overline{AR_{it}}$'s are equal to zero, with the alternative being that they are not. If the $\overline{AR_{it}}$'s are significantly different from zero then we can state that the market has reacted to the event, i.e., has reacted differently than we would expect had the event not taken place. The statistical tests used in this study to determine the statistical significance (z-statistic) of the average abnormal returns is the standardized average abnormal return (SAR) and is denoted as

$$SAR_t = \frac{\overline{AR_t}}{s_t/\sqrt{N}}$$

where

s_t = the standard deviations of the average returns on day t

N = number of firms.

To determine the standardized cumulative abnormal return W_i for the aggregate sample the SPE_{it}s are summed for each security over the event-window thus:

$$W_i = \sum_{t=1}^{d} \frac{SPE_{it}}{\sqrt{d}}$$

where d = number of days in the event window.

To test the significance of W_i for a sample of N securities, we use

$$Z = \overline{W_i}\ \sqrt{N}$$

$$\overline{W_i} = \frac{1}{N} \sum_{i=1}^{N} W_i$$

where $\overline{W_i}$ is equal to the average standardized cumulative prediction error. Thus, the z- statistic is used to determine the probability that $\overline{W_i}$ is different from zero, i.e., whether the cumulative effect of the event over the event-window, is significant or not.

In addition to a pure event study, the CARs and CSPEs derived from it will be used in both non-parametric and regression analysis to investigate the cross sectional variation in the abnormal returns.

4.5 EMPIRICAL RESULTS

4.5.2 Director Resignations – Evidence for the Liability Crisis

4.5.2.1 Event Study

The event study methodology, described in the previous section, is conducted in order to establish shareholders' response to the resignations of directors. In order to gain insight as to the existence of a liability crisis, in addition to the total sample the event study is also conducted on a number of sub-samples defined by year and by reason for the directors' resignation. Table 4.4 summarize the results for the total sample and the sub-samples.

The results for the total sample, presented in Panel A of Table 4.4, are evidence that in the aggregate shareholders do not respond in a statistically significant manner to the news of director resignations. Thus, for the total sample of 86 firms the mean cumulative abnormal return on the three days following the announcement of these resignations is 0.2% (median of -0.5%) and not statistically significant. In addition, the number of positive CARs is almost equal to the number of negatives.

Panel B in table 4.4 presents results for sub-samples defined by the year in which the directors' resignation occurred. In years 1984, 1985, and 1986 cumulative abnormal returns surrounding the announced resignations of directors were negative. The CARs for 1985 and 1986 are statistically significant at the 1% level. In addition, for portfolios of firms where directors resigned between either 1984 and 1986 or 1984 and 1987, firms lost on average 4.9% and 4% of shareholders value respectively. These results are significant at a 1% significance

level. Using a non-parametric sign test, CARs for 1986 and the 1984-1986 portfolios are negative with a statistical significance of 5%. Thus, resignations during the so called liability crisis were viewed by shareholders as negative events, which is consistent with the idea that the directors' crisis did indeed occur, resulting in an increase in the value of the existing board of directors.

Consistent with the hypothesis presented in section 4.3, resignations that occurred in years following the liability crisis had either no effect or a positive effect on shareholder wealth. During 1989 and 1990, resignations of directors brought about a significant positive return. In addition, the CARs for 1988 through 1990 are positive and statistically significant at the 5% level. However, when 1989 is excluded from this analysis, CARs while positive are not statistically significant. In both cases, the non-parametric sign test provides no significant evidence that there is a positive market response. No hypothesis has been presented with regard to possible reasons for the strong positive response in 1989. However, the non-negative response to director resignations following the resolution of the directors liability crisis during 1987, is consistent with the view that under normal conditions the resignation of directors, in aggregate has no significant negative effect on firm value. In normal times, these directors can be replaced, and while their resignations can convey new information about the firm, there is no reason to assume this information to be negative, a priori.

Panel C in Table 4.4 presents the event study results for a sub-sample of 19 firms where the stated reason for the directors' resignation was the inability of the firm to purchase directors and officers liability insurance. The results for this sample are significantly negative at the 5% level. On average these firms lose

6.3% of shareholders' value on the announcement of directors' resignations. This is consistent with the idea that shareholders view the inability of the firm to purchase D&O liability insurance, and the consequent resignations of directors as events harmful to the firm in a significant way. Since the resignations occurred between 1984 and 1986 for all but one of these firms, this result is consistent with the results for the sub-samples defined by year.

Table 4.5 presents results for comparisons between portfolios. The purpose of these comparisons is to establish whether or not there is a statistically significant difference between the various portfolios discussed above. For this purpose three statistical tests are used: a parametric t-test, a non-parametric Mann-Whitney test and a non-parametric Kolmogorov-Smirnov test. These tests allow for testing the differences between two portfolios with regard to their mean and their underlying distribution. Three different tests are used so as not to be restricted to specific assumptions regarding the portfolios distribution and in order to control for possible outlier effects.

Panel A in Table 4.5 presents the results of comparing the portfolios of firms where directors resigned before the liability crisis with those were the directors resigned following the crisis. All four comparisons of these portfolios show a significant difference, for the most part at the 1% level. Differences in mean ranged from 9.9% to 8.7%, while differences in median ranged from 7.1% to 5.6%. In all cases, resignations during the crisis resulted in significantly lower (negative) CARs than did resignations after the crisis.

Panel B, Table 4.5 shows the results of comparing the portfolio of 19 firms where directors resigned explicitly because of lack of liability protection, and all

other firms (67 firms). The difference in means is 8.4% and in median is 6.6%. These differences are significant at the 5% level using the t-Test and the Mann-Whitney test. They are only significant at the 10% level using the Kolmogorov-Smirnov test. These results are consistent with the notion that shareholders view the departure of directors due to increased liability as a negative event.

4.5.2.2 Cross-Sectional Regressions

Additional evidence for the existence of a liability crisis effect on shareholders' evaluations of directors resignations is provided by studying results for several cross-sectional regressions. The dependent variable in these regressions are the CARs over a 3-day period following the announced resignations of directors. Because of potential heteroscedasticity, each stock's Cumulative Standardized Prediction Error (CSPE) is also used as a dependent variable. Since this section is concerned with evidence for the existence of a liability crisis, the main independent variables will be dummy variables based on the year of resignation, and a dummy variable for those firms where directors resigned specifically because of lack of liability insurance.

Table 4.6 presents the results of three regression models. Model 1 uses as its independent variables a dummy variable that takes on the value of 1 for firms where the resignations of directors occurred between 1984 and 1986 and a "Liability dummy variable" that takes on the value of 1 for the 19 firms where directors resigned explicitly because of lack of director liability insurance. Model 2 uses a dummy variable for those resignations between 1988 and 1990 and the

"Liability" dummy. Finally Model 3 includes only the "Liability" dummy variable.

All three models in Table 4.6 provide evidence consistent with that presented in Tables 4.4 and 4.5: the hypothesis that firms reacted negatively to director resignations during the so called "liability crisis" cannot be rejected at the 1% level. In addition, there is evidence that shareholders reacted positively to director resignations after the crisis, consistent with the idea that shareholders view the departure of directors, when these directors can be replaced, as a positive event. This result could indicate that shareholders view the departure of directors as a positive change in the structure of the board. As will be discussed in the next section, this might be the result of the fact that a large fraction of our sample are of poorly performing firms.

Additionally, Model 3 presents weak direct evidence that shareholders viewed the issue of liability as significant. When CAR is the dependent variable, the dummy for the 19 firms where directors resigned because of increased liability is negative and significant at the 5% level. However, when CSPE is the dependent variable, this dummy is not significant. In addition, this variable is statistically insignificant in Models 1 and 2.

The difference in response between the two periods, and the negative coefficient for the Liability variable are consistent with the idea that during 1987 a shift occurred in the way shareholders valued resigning directors. As discussed above, this shift is believed to have happened as a result of the reduced liability risk faced by directors following statutory changes that occurred during 1987.

4.5.3 Director Resignation and Firm Performance

4.5.3.1 Total Sample

The previous section documented the shift in shareholders' response to directors resignations between the period of the liability crisis and the period that followed it. In this section these results will be further examined while controlling for the performance of individual firms. The influence of firm performance on shareholders response to directors' resignations is studied over the whole period in this section, and for the periods during and after the liability crisis, in the next.

Table 4.7 summarizes the results for the total sample over the whole time period. As independent variables, six performance measures are used: the log of the firm's market value divided by the value of its total assets for the year preceding the resignations, the firm's operating income divided by total assets and adjusted for industry, the difference in these measures between the year preceding the resignations and their value two years before the resignations, and a dummy variable for low operating firms (LOP) and another dummy for high operating firms (HOP) (see section 4.4.3 for a detailed description of these variables).

The results in table 4.7 provide no evidence of any relationship between firm performance and shareholder's response to the resignation of directors. Thus, for the sample as a whole the value placed on maintaining the board of directors as it is does not vary with performance. However, the dummy variables controlling for the period in which the resignation took place are statistically significant in all the regressions in Table 4.7. This result further establishes that

there was a significantly different shareholder response to directors resignations during and after what has been defined as the crisis years. This result holds even when controlling for various performance measures.

The results in Table 4.7 reinforce the idea that a structural shift occurred following or during 1987. Because of this evident structural shift, the results in this Table might not be providing relevant evidence regarding the true relationship between performance and shareholder value changes that resulted from director resignations. Therefore, in the next section the relationship between performance and shareholder response to director resignations will be examined separately, for the period during the crisis and for the period after it.

4.5.3.2 Sub–Sample (by Period)

Table 4.8 and 4.9 recreate Table 4.7 for the two sub samples divided by the period of resignation. In Table 4.8 evidence regarding the relationship between performance and shareholder response to director resignation during the crisis years (1984-1986) is presented. In all the models tested the coefficient for the performance variable as measured by the market value divided by total assets is positive and statistically significant at the 1% and 5% levels when CARs and CSPEs are respectively used as the dependent variables. This result suggests that shareholders of firms which are performing poorly, based on this measure, react more negatively to the news of directors resigning that shareholders of better performing firms.

However, while the result for the market value variable is strong, there is no evidence from the accounting measures of performance that would confirm it.

The coefficients for the operating income and the LOP and HOP dummy variables are insignificant for all the regressions in this period. This, of course, complicates the issue and suggests that shareholders are not responding to accounting measures of performance. Rather shareholders react negatively to those firms which have a dismal future and/or poor management. The variable of market value divided by total assets proxies here for the firms' future investment opportunities and projected economic rents in its current form under current management.

The results imply that during the liability crisis, shareholders of firms whose future prospects were poor, even if current earnings were not reflective of this situation, valued their existing directors more than did shareholders of firms that were doing relatively well. These poorly performing firms could be facing the prospect of financial distress. These results are consistent with the idea, presented in chapter 3, that the value of having a functioning, competent board of directors increases as firms approach financial distress. Therefore, since during the liability crisis directors who resigned were hard to replace, the value of the existing board increased for firms facing the possibility of financial distress. Thus, for these firms maintaining a functioning board with outside directors is more important than getting rid of the directors who participated in bringing the company to its dismal current situation.

The results for the sub-period 1988 to 1990, presented in Table 4.9, are opposite, if somewhat weaker, than those of the 1984 to 1986 period. The coefficients for the market value to total assets variable is in this case negative and statistically significant. This suggests that during the period following the

liability crisis, when it was relatively easy to replace directors, the resignation of directors in poorly performing firms was viewed as a positive event. The discussion presented in section 4.3 suggests that since directors were replaceable, firms that were doing poorly could add value by getting rid of the directors that were part of the board that brought about the firm's poor performance. Thus, we observe a shift, not only in the aggregate shareholder response to the resignation of directors, but also, and possibly primarily in the response of shareholders to resignations in poorly performing firms.

For the regression in Model 1, Table 4.9 where CARs are the dependent variable, both the market value divided by total assets and the operating income measures are negative and statistically significant. In this case the accounting measure confirms the results obtained by using the market value measure. This adds some credence to the idea presented above that firms that are doing poorly are being rewarded for the loss of directors relative to those firms that are doing relatively well. It should be noted that in no other regression is their a significant relationship between the accounting performance measures and returns.

In the first regression in Model 1, Table 4.9, the coefficient for Total Assets is positive and statistically significant. This result is puzzling; for the period between 1988 and 1990, controlling for firm performance, shareholders responded more positively to director resignations in large firms than in small ones.

The results presented in this section provide further evidence of a structural shift in shareholders attitudes towards the resignations of directors from the board of directors between the period of the liability crisis and the period that

followed. While in aggregate, evidence exists that shareholders viewed director resignations as negative events during the crisis but not after it ended, there is also evidence that the relationship between performance and shareholder reaction shifted during these periods. The results support the idea that firms with poor future prospects were severely penalized when their directors resigned during the crisis years, but that after the crisis shareholders of similar firms viewed the resignations as positive events. These results support the hypotheses presented in section 4.3.

4.5.4 Director Resignations and Board Characteristics

In this section further analysis of the hypotheses presented above is conducted while controlling for some of the characteristics of each firm's board of directors. More specifically the following characteristics are looked at: the percent of the board resigning, the percent of outside directors resigning (from the pool of outside directors on the board), the percent of outsiders on the board prior to the resignations, whether or not the CEO, President, or Chairman were among those resigning, and the ratio between the number of directors resigning and the number being appointed at the same time.

Tables 4.10, 4.11 and 4.12 present the results for three models over the three sample periods; the total sample over the entire period between 1984 and 1990, the period between 1984 and 1986, and the period between 1988 and 1990. Each model includes CARs and CSPE as the dependent variables.

In Table 4.10, for the total sample, the negative impact of resignations that occur during the crisis years is conformed;. in all three models the dummy

variable for resignations between 1984 and 1986 is negative and significant at the 1% level.

There is evidence that the resignation of a CEO, President, or Chairman has a negative impact on shareholder wealth. This result is not consistent with other literature (Bonnier and Bruner (1989), Furtado and Rozeff (1987), Warner, Watts and Wruck (1988), Weisbach (1988), Reinganum (1985)), that documents a non negative response to the announced resignation of a CEO. However, there might be a connection between the resignation of a CEO and the resignations of other board members that was not controlled for by these other studies. In any case, the explanation for this result is not obvious, especially in the case of relatively poorly performing firms.

For the total sample, the percentage of directors resigning, the percentage of outside directors resigning, and the percentage of outsiders on the board before the resignations do not significantly effect shareholders' reaction to the resignations. An interesting, if unexplainable result in Model 3 is that the performance variable of the log of market value divided by total assets is significant at the 5% level. The contradicts results from section 4.5.3 and from Model 2 that showed no relationship between performance and shareholder response to the resignations. However, since it has already been established that there was a structural shift in the way shareholders reacted to directors resignations, the results for the total sample cannot be viewed as very revealing.

More interesting and meaningful results are presented in Tables 4.11 and 4.12. These regressions emulate the total sample regressions for the two sub samples; resignations that occurred during and after the crisis.

Table 4.11 present results for the period of the liability crisis, 1984-1986. The results in Models 2 and 3 confirm the positive relationship between performance and shareholders' response to the resignations. In both cases the coefficients for the market value variable are positive and significant. In addition, weak evidence is provided (weak because this variable is not significant when CSPE is used as the dependent variable), that during this period the appointment of new directors immediately (within 3 days) after the resignations of old directors is valuable to shareholders (models 2 and 3). The greater the ratio of directors appointed to those resigning, the more positive shareholders respond to the resignations. This is consistent with the notion that during this period directors were hard to find, and that the ability of the firm to replace all or part of its directors was a positive signal to shareholders.

In Models 1 and 3, the coefficient for the percent of outside directors resigning (percent of outsiders on board before the resignations that resigned) is negative and statistically significant. This is consistent with the notion that shareholders view outside directors as valuable, and that during the liability crisis, when outside directors were hard to recruit, their loss was perceived as a negative event. On the other hand, the coefficient for the overall percentage of directors resigning from the board is positive and significant. Controlling for the outside directors, this variable captures shareholders response to the resignation of inside and gray directors. The positive response on behalf of shareholders to the resignation of these directors is evidence to the fact that there was no crisis with regard to hiring new inside or gray directors. In addition, when considering the fact that many of these companies are under-performers, the resignation and

possible replacement of insiders could be viewed as beneficial. Consistent with this result is the fact that for this period shareholders reaction to the resignation of a CEO, President or Chairman is not significantly negative at it is for the period following the "crisis". Thus, it can be concluded that shareholders are primarily reacting negatively to the loss of outside directors during the director liability crisis.

The coefficient for the percentage of outside directors on the board before the resignations, in model 4 and 6, is negative and significant. Thus, holding the percent of outside and other directors resigning constant, the more outside directors on a given board the more negative shareholders response is. This could mean that when a given percentage of outside directors resign from boards in which they have a high percentage of members, shareholders view this as a more negative event than if the same percentage of outsiders resigned from a board were their were only a few outsiders. This result is puzzling. Shareholders thus view the resignation of directors from a board dominated by outsiders as a more negative event than otherwise. It is possible that the reason for this is that in firms where outsiders dominate there would be less reason for outside directors to leave, thus their departure might signal a more substantial problem than otherwise.

The results for the 1988 to 1990 sub-period, presented in Table 4.12, reaffirm the negative relationship between performance and shareholders' response to directors resignations. In addition, there is evidence that the resignation of a CEO, President, or Chairman during this period had a significant negative effect on shareholder wealth (Models 2 and 3). On the other hand, except in the case of these top executives, there is no evidence that the type or

number of directors resigning had in itself any effect on shareholders. The coefficient for the ratio of appointed directors to resigning directors is not statistically significant. This is consistent with the hypothesis that following the liability crisis, when it was relatively easy to find new directors, shareholders placed no special value on appointing new directors as soon as the old directors resigned.

In summary, the regressions in Table 4.10 through 4.12 provide additional evidence as to the differences in shareholder reactions to director resignations between the liability crisis period and the period following it. There is evidence that during the crisis shareholders reacted negatively to directors' resignations, especially the resignations of outside directors. In addition, shareholders viewed the immediate replacement of directors as a positive event due to the difficulties in attracting directors. On the other hand, following the crisis years, whether or not the CEO, President, or Chairman resigned had significant impact on shareholders response, while during the crisis the resignation of one of these office holders seems to be of lessor significance.

4.5.5 Director Resignations and Other Events

In this section, other events, both directly related and unrelated to the directors' resignations, are analyzed for possible effects on shareholder's reaction. First, the stated reasons for the directors resignations are analyzed with respect to their effect on shareholders response to the resignations themselves. Second, other events that occur simultaneously with the announced resignations and that might have an effect on shareholders are analyzed..

4.5.5.1 Reasons for Resignation

Of the 86 resignations in the total sample, in 61 an explicit reason for the resignation was provided. This section analyzes shareholders' response to the resignations while controlling for the reason provided. It is important to realize that the reasons given for a directors' resignation do not necessarily coincide with the real reason for his departure. However, while this is probably true in some of the cases presented here it is impossible to identify these cases and separate them from the rest.

Panel A in Table 4.13 provides data on various portfolios established based on a similarity in the reason provided for the resignation. The largest portfolio (25 firms) includes those resignations where no reason for the resignation is provided. No expectation regarding shareholder response can be made in this case, and indeed the mean return for the portfolio, while slightly positive, is statistically insignificant. The second largest portfolio is made up of the 19 firms from which directors resigned because of their firm's inability to provide adequate liability insurance for them. As already observed in section 4.5.2, the expected and the actual result is a significant negative shareholder response.

The only other significantly large portfolio includes those resignations brought about by a change in the firms ownership (17). A change in ownership is defined as any significant sale of shares by a beneficial shareholder, or a purchase of more than 5% of the firm stock. However, this does not include mergers, or takeovers where the ownership and control change. If the news report announcing

the resignation, explains it by reference to an ownership change, that firm is included in this portfolio. The resignation of old directors to make room for new directors that results from such a change in ownership should have a non negative market response. It is natural for new owners to seek representation on the board, and for representatives of old owners to resign. Indeed, the markets response to these firm was slightly positive (2.2%) but not statistically significant.

The rest of the portfolios are small. However it is important to note that for two small portfolios the markets reaction to the resignations was statistically significant (although these results should be somewhat suspect given the small number of firms in each portfolio.) For those firms where directors resigned because of the firms' restructuring (7 firms) the market responded very positively to the resignations (mean of 13.70%, median of 3.4%). This result might reflect the fact that actual changes in the board of directors are evidence of the degree to which management is serious about an announced restructuring. The other portfolio that generates significant returns is for those firms whose directors resigned for personal reasons. This portfolio contains only 4 firms and therefore the significance of this result is questionable. In any case this could be an example were the real reason for the resignation is not provided, and "personal reasons" is used instead.

In Panel B of Table 4.13, several of the portfolios from Panel A are aggregated. Thus, the portfolios that included as reasons for resignations changes in ownership and mergers are combined (22 firms) into one portfolio. The resulting mean CAR is positive but not statistically significant. This is the same

result achieved when all the other portfolios excluding the "Liability" and the "no reason given" portfolios are aggregated.

Panel C presents comparisons of the aggregate portfolios with the remaining sample. The first comparison is identical to that presented in Panel B of Table 4.5, and establishes that the "Liability" portfolio has significantly lower CARs than the rest of the sample. This is the only significantly different portfolio. Thus, it can be concluded that this analysis provides little evidence that any of the reasons given for the directors resignations, excluding the lack of Liability, provide information as to shareholders response to these resignations.

Tables 4.14 through 4.16 add to this analysis by looking at cross sectional regressions using the portfolios described above as determinants for dummy variables. In addition to examining the total sample, the regression analysis allows for an analysis of the two sub–samples based on when the resignations occurred.

The two significant coefficients, for the total sample in Table 4.14, are for those firms where the resignations were the result of restructuring, and where they were the result of the firms' inability to purchase D&O liability insurance. This result is consistent with the portfolio analysis above. However, as can be seen in Table 4.16, the restructuring variable is only significant for the 1988-1990 sub-period. In the 1984-1986 sub-period (4.15) none of the dummy variables are significant. The three firms from which directors resigned during the 1988-1990 period, due to restructuring, are significant in explaining a substantial part of the variation in returns during this period. The importance of this result is that in order to make accurate statements regarding shareholders responses to directors

resignations during this period it becomes essential to control for the "restructuring" firms. In addition, it is important to note that for the period of the crisis no one reason for the directors resignations dominated. The negative response to the resignations was consistent throughout the sample during this period.

For both time periods, controlling for the reason for resignation, did not mitigate the strong explanatory power of the Market Value over Total Assets variable. Consistent with previous regressions, this variable was significant and positive for the "crisis" period and negative and significant for the years following the crisis.

4.5.5.2. Other Concurrent Events

The news releases that announced the directors' resignations were carefully scanned for possible confounding events, i.e., events that could, independent of the resignation, result in a shareholder response that could influence the excess returns measured following the resignations. 46 firms had at least one other occurrence that could possibly result in shareholders response.

Table 4.17, Panel A provides CARs for portfolios defined by type of event. Panel B provides comparisons between portfolios defined by specific events and the rest of the sample. Of these portfolios three have significant CARs; the portfolio defined by changes in ownership, and the portfolio of misc.' events. Changes in ownership as an event occurring concurrently with the resignations seems to have a positive impact on CARs. However, Panel B provides only weak evidence that this portfolio is truly different from the rest of

the sample. The same seems to be true of the misc.' portfolio and the portfolio of firms were the CEO President or Chairman resigned with the directors. While the effect of these portfolios on CARs is negative, there is no significantly difference between them and the rest of the sample.

Tables 4.18 through 4.20 present regression results for dummy variables whose definition is the same as for the portfolios above. What is obvious here, as with the results in previous sections, is the different influence of the various variables in the different sub-periods. For the 1988-1990 sub-period (Table 4.20) none of the dummy variables is significant. For the total sample (Table 4.18), when CPSE is the dependent variable, the ownership variable is positive and statistically significant. In the 1984-1986 sub-period (Table 4.19) this variable is significantly positive for both dependent variables. Thus, changes in ownership that are announced concurrently with the announcement of directors resigning, have a positive effect on shareholder value during the crisis years. This is consistent with the idea that the replacement of directors is natural following ownership changes, and that such changes mitigate the negative effects associated with directors' resignations during the crisis years. This is especially true given the fact that most of the firms in the sample are not firms that are performing well. Thus, a change in directors that is associated with a change in ownership is viewed as positive.

In all the regressions for the sub-periods, the coefficient for the market value to total assets variable is statistically significant. Thus, even when controlling for various potentially contaminating events, the relationship observed above, between performance and directors resignations, holds.

4.6 SUMMARY

This chapter documents shareholder's average wealth effects resulting from director resignations. Evidence that shareholders responded differently to directors' resignation during and after the so called "liability crisis" is presented. These results suggest that such a crisis did indeed occur, and that as a result director resignations during this period had a significant negative impact on shareholder wealth.

In addition, evidence is presented that shareholders of poorly performing firms value the services provided by outside directors. When replacements for these directors are hard to find, for example during the liability crisis, the resignation of directors resulted in a more negative response than for better performing firms. Alternatively, after the crisis shareholders of poorly performing firms reacted positively to resignation of directors, as it signaled a change from the board that had brought the company to its weak position. Thus, in both cases shareholders of poorly performing firms, through their reaction to directors resignations, express the value they place on having a functioning board which includes outsiders.

The evidence presented in this paper suggest that sometime around 1987 a significant shift occurred in the governance of US corporations. This shift should be considered in future studies examining governance issues around this period.

Table 4.1: Descriptive Statistics – Resignations (of at least two directors) and Appointments

Panel A: Total Sample

		Mean		Median	
	# of Firms	Resignations	Appointments	Resignations	Appointments
Total Sample	86	3.407	1.302	3	1

Panel B: Sub samples by Year

		Mean		Median	
Year	# of Firms	Resignations	Appointments	Resignations	Appointments
1984	2	4	0	4	0
1985	14	4.14	1.86	4	1.5
1986	25	3.6	0.76	4	0
1987	8	2.88	1	2	1
1988	11	2.91	1.36	3	0
1989	7	4.29	2.29	4	2
1990	19	2.74	1.47	2	1
1984-1986	41	3.805	1.098	4	0
1984-1987	49	3.653	1.082	3	1
1988-1990	37	3.081	1.595	3	1
1987-1990	45	3.044	1.489	3	1

Panel C: Comparison of Portfolios (1984-1986 vs. 1988-1990)

	Difference in Mean	Difference in Median	t-Test	Mann-Whitney	Kolmogorov - Smirnov
Resignations	0.724	1	2.00**	1.63	4.454
Appointments	-0.497	-1	1.446	1.298	3.27
Res. - App.	1.221	0	3.06*	2.740*	4.333
App. / Res.	-0.196	-0.5	1.838***	1.701***	7.627**

* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.2: Descriptive Statistics – Board Characteristics

Panel A: Total Sample

		Mean			Median		
Year	Number of Observations	Size of Board	Percent of Outside Directors	Percent of Outside Directors Resigning	Size of Board	Percent of Outside Directors	Percent of Outside Directors Resigning
Total Sample	76	8.842	57.70%	63.40%	9	60.00%	63.30%

Panel B: Sub samples by Year

		Mean			Median		
Year	Number of Observations	Size of Board	Percent of Outside Directors	Percent of Outside. Directors Resigning	Size of Board	Percent of Outside Directors	Percent of Outside Directors Resigning
1984	2	9.5	58.30%	65.00%	9.5	58.30%	65.00%
1985	13	11.54	60.20%	57.20%	12	66.70%	50.00%
1986	24	8.25	56.40%	71.30%	8.25	57.10%	66.70%
1987	7	8.86	55.70%	52.10%	8	53.30%	40.00%
1988	7	8.86	56.30%	57.30%	9	62.50%	66.70%
1989	6	7.5	54.00%	86.10%	7	55.00%	100.00%
1990	17	8	60.40%	55.80%	7	57.10%	50.00%
1984-1986	39	9.41	57.70%	66.30%	9	60.00%	66.70%
1984-1987	46	9.33	57.40%	64.10%	9	60.00%	63.30%
1988-1990	30	8.1	58.20%	62.20%	7	58.60%	63.30%
1987-1990	37	8.24	57.70%	60.30%	8	57.10%	60.00%

Panel C: Comparison of Portfolios (1984-1986 vs. 1988-1990)

	Difference in Mean	**Difference in Median**	**t-Test**	**Mann-Whitney**	**Kolmogorov - Smirnov**
Board Size	1.31	2	1.65	1.98**	5.105
% Out. Dir.	-0.40%	1.40%	0.1	0.94	1.5
% Outside Dir. Res.	4.10%	3.40%	0.53	0.08	1.16

* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.3: Descriptive Statistics – Performance Measures

Panel A: Total Sample

		Mean			Median				
Year	Number of Firms	Total Assets (0000)	Market Value / Total Assets	Industry Adjusted OPINC/ Total Assets	Total Assets (0000)	Market Value / Total Assets	Industry Adjusted OPINC/ Total Assets	# of LOP Firms	# of HOP Firms
Total Sample	86	639.2	0.844	-0.1	89.713	0.735	-0.074	32	11

Panel B: Sub samples by Year

		Mean			Median				
Year	Number of Firms	Total Assets (0000)	Market Value / Total Assets	Industry Adjusted OPINC / Total Assets	Total Assets (0000)	Market Value / Total Assets	Industry Adjusted OPINC/ Total Assets	# of LOP Firms	# of HOP Firms
1984	2	125.6	0.752	-0.033	125.6	0.752	-0.033	0	0
1985	13	2324.7	0.668	-0.097	101.4	0.735	-0.04	5	5
1986	24	209.5	0.915	-0.154	94.9	0.701	-0.139	8	2
1987	7	333.4	1.053	0.024	206.6	0.821	0.028	1	2
1988	7	400.7	0.966	-0.069	49.08	0.857	0.016	4	2
1989	6	173.6	0.859	-0.069	45.05	0.734	-0.035	3	0
1990	17	455.2	0.724	-0.121	44.1	0.702	-0.117	11	0
1984-1986	41	927.6	0.823	-0.129	94.9	0.702	-0.116	13	7
1984-1987	49	830.6	0.86	-0.104	106.3	0.702	-0.076	14	9
1988-1990	37	385.7	0.822	-0.095	45.1	0.736	-0.072	18	2
1987-1990	45	376.4	0.863	-0.074	54.5	0.736	-0.044	19	4

Panel C: Comparison of Portfolios (1984-1986 vs. 1988-1990)

	Difference. in Mean	Difference. in Median	t-Test	Mann-Whitney	Kolmogorov - Smirnov
Total assets	541.9	49.8	1	2.096**	8.417**
MV/TA	0.001	-0.034	0	0.3	2.765
Adjusted OPINC/TA	-0.033	-0.188	0.903	0.745	2.902

* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.4: Market Reaction (CARs) to Directors Resignations

Panel A: Total Sample

Year	# of Firms	Mean CAR	z	# Negative	p-value for sign test	median CAR
Total Sample	86	0.20%	0.92	45	0.80	-0.50%

Panel B: Sub samples by Year

Year (a)	# of Firms	Mean CAR	z	# Negative	p-value for sign test	median CAR
1984	2	-7.00%	0.91	1	0.99	-7.00%
1985	14	-5.50%	2.60*	8	0.21	-2.70%
1986	25	-4.50%	2.78*	19**	0.02	-4.70%
1987	8	1.00%	0.26	2	0.71	2.10%
1988	11	1.80%	0.15	5	0.99	2.60%
1989	7	10.40%	2.98*	2	0.45	8.00%
1990	19	6.40%	1.88***	8	0.35	1.70%
1984-1986	41	-4.90%	3.88*	28**	0.03	-4.60%
1984-1987	49	-4.00%	3.44*	30	0.152	-3.50%
1988-1990	37	5.80%	2.56**	15	0.68	2.60%
1988,1990	30	4.70%	1.4	13	0.58	2.10%

Panel C: Subsample – Liability as Cause for Resignation

Year (a)	# of Firms	Mean CAR	z	# Negative	p-value for sign test	median CAR
Liability	19	-6.30%	2.419**	14***	0.06	-5.90%

* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.5: Market Reaction (CARs) to Directors Resignations - Portfolio Comparison

Panel A: Comparison of Portfolios – By Year

	Difference. in Mean	Difference. in Median	t-Test	Mann-Whitney	Kolmogorov - Smirnov
1984-1986 vs. Rest of Sample	9.90%	7.10%	3.62*	3.73*	15.85*
1984-1986 vs. 1988-1990	8.70%	5.60%	2.948*	3.627*	13.933*
1988-1990 vs. Rest of Sample	-9.80%	-6.10%	3.543*	3.258*	10.215**
1988,1990 vs. 1984-1987	-8.70%	-5.60%	2.948*	2.596*	7.162***

Panel B: Comparison of Liability Portfolio with Rest of Sample

	Difference. in Mean	Difference. in Median	t-Test	Mann-Whitney	Kolmogorov - Smirnov
Liability vs. Rest of Sample	-8.40%	-6.60%	2.47**	2.55**	7.14***

* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.6: Summary Table for Regressions - By Year (Total Sample)

86 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	**CSPEs**	**CARs**	**CSPEs**	**CARs**	**CSPEs**
Intercept	0.05	0.362	-0.025	-0.453	0.021	0.03
	(2.650)*	(1.856)***	(1.082)	(1.879)***	(1.297)	(0.179)
Years 1984-1986	-0.085	-0.969	-	-	-	-
	(2.698)*	(2.966)*				
Years 1988-1990	-	-	0.083	0.874	-	-
			(2.665)*	(2.696)*		
Liability (a)	-0.033	0	-0.038	-0.102	-0.084	-0.585
	(0.858)	(0.001)	(1.032)	(0.265)	(2.467)**	(1.65)
F Statistic for Regression	6.911*	5.879*	6.814*	5.087*	6.086**	2.707
R Squared Adjusted	14.30%	12.40%	14.10%	10.90%	6.80%	3.10%
	(12.20%)	(10.30%)	(12.00%)	(8.80%)	(5.60%)	(2.00%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

a) Liability – In the resignation announcement it states that the Directors resigned because of lack of adequate D&O Liability Insurance for their firm.

Table 4.7: Summary Table for Regressions - By Performance Measures (Total Sample)

86 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2	
	CARs	**CSPE**	**CARs**	**CSPE**
Intercept	-0.015 (0.303)	0.092 (0.177)	0.042 (1.059)	0.398 (0.815)
Years 1984-1986	-0.114 (3.885)*	-1.036 (3.392)*	-0.087 (3.562)*	-0.904 (2.999)*
Ln(MV/TA)	0 (0.036)	0.03 (0.133)	-	-
Ln(MV/TA) - Lag1 of Ln(MV/TA)	-	-	0.021 (0.97)	0.164 (0.62)
Adj(OpInc)	-0.144 (1.382)	-0.913 (0.84)	-	-
Adj(OpInc) - Lag1 of Adj(OpInc)	-	-	-0.124 (1.501)	-0.683 (0.67)
Low Operating performance	-0.006 (0.185)	0.166 (.511)	0.013 (0.508)	0.261 (0.816)
High Operating Performance	0.005 (0.107)	0.274 (0.541)	0.034 (0.84)	0.387 (0.78)
Ln(Total Assets)	0.013 (1.375)	0.028 (0.283)	0 (0.589)	-0.061 (0.628)
Number of Firms	86	86	82	82
F Statistic for Regression	2.616**	2.078***	2.746**	2.002***
R Squared Adjusted	16.60% (10.20%)	13.60% (7.10%)	18.00% (11.50%)	13.80% (6.90%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.8: Summary Table for Regressions - By Performance Measures for the Liability Crisis (1984-1986 Sample)

41 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3		Model 4	
	CARs	**CSPE**	**CARs**	**CSPE**	**CARs**	**CSPE**	**CARs**	**CSPE**
Intercept	-0.03	-0.153	-0.02	0.13	-0.02	-0.159	-0.031	0.201
	(0.526)	(0.212)	(0.409)	(0.213)	(0.33)	(0.206)	(0.575)	(0.292)
Ln(MV/TA)	0.085	0.647	0.082	0.662	0.082	0.663	-	-
	(3.610)*	(2.16)**	(3.33)*	(2.12)**	(3.279)*	(2.09)**		
Ln(MV/TA) - Lag1 of Ln(MV/TA)	-	-	-	-	-	-	0.083	0.54
							(3.021)*	(1.53)
Adj(OpInc)	0.011	0.025	-	-	-0.001	-0.086	-	-
	(0.105)	(0.019)			(0.00)	(0.06)		
Adj(OpInc) - Lag1 of Adj(OpInc)	-	-	-	-	-	-	-0.13	-0.824
							(1.13)	(0.56)
Low Operating performance	-	-	0.003	0.234	-0.007	0.234	-0.019	0.125
			(0.197)	(0.537)	(0.194)	(0.529)	(0.521)	(0.265)
High Operating Performance	-	-	0.027	0.372	0.027	0.38	0.043	0.507
			(0.54)	(0.58)	(0.52)	(0.57)	(0.77)	(0.71)
Ln(Total Assets)	0.003	-0.044	0.004	-0.077	-0.004	-0.074	-0.003	-0.11
	(0.281)	(0.355)	(0.042)	(0.591)	(0.035)	(0.512)	(0.365)	(0.807)
Number of Firms	41	41	41	41	41	41	40	40
F Statistic for Regression	4.410*	1.738	3.348**	1.413	2.604**	1.1	2.31***	0.683
R Squared Adjusted	26.3%	12.4%	27.1%	13.6%	27.1%	13.6%	25.4%	9.1%
	(20.4%)	(5.2%)	(19.0%)	(4.0%)	(16.7%)	(1.2%)	(14.4%)	(0.0%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.9: Summary Table for Regressions - By Performance Measures for the Post-crisis Period (1988-1990 Sample)

37 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3		Model 4	
	CARs	CSPE	CARs	CSPE	CARs	CSPE	CARs	CSPE
Intercept	-0.145 (2.098)**	-0.662 (1.024)	-0.084 (1.094)	-0.396 (0.577)	-0.165 (1.99)***	-0.801 (1.027)	0.003 (0.006)	-0.027 (0.036)
Ln(MV/TA)	-0.086 (2.578)**	-0.589 (1.91)***	-0.075 (2.082)**	-0.508 (1.574)	-0.091 (2.589)**	-0.589 (1.78)***	-	-
Ln(MV/TA) - Lag1 of Ln(MV/TA)	-	-	-	-	-	-	-0.068 (1.96)***	-0.419 (0.98)
Adj(OpInc)	-0.32 (2.049)**	-1.852 (1.273)	-	-	-0.38 (2.048)**	-1.886 (1.09)	-	-
Adj(OpInc) - Lag1 of Adj(OpInc)	-	-	-	-	-	-	-0.217 (1.584)	-1.149 (0.69)
Low Operating performance	-	-	0.016 (0.32)	0.235 (0.512)	0 (0.001)	0.152 (0.327)	0.041 (1.047)	0.339 (0.715)
High Operating Performance	-	-	-0.031 (0.28)	-0.333 (0.34)	0.079 (0.67)	0.214 (0.19)	-0.051 (0.62)	-0.542 (0.55)
Ln(Total Assets)	0.034 (2.46)**	0.166 (1.28)	0.026 (1.78)***	0.128 (0.978)	0.036 (2.45)**	0.179 (1.287)	0 (0.047)	0.028 (0.179)
Number of Firms	37	37	37	37	37	37	34	34
F Statistic for Regression	4.290**	1.801	1.938	1.007	2.544**	1.045	1.639	0.481
R Squared Adjusted	28.10% (21.5%)	14.10% (6.3%)	19.50% (9.4%)	11.20% (0.8%)	29.10% (17.7%)	14.40% (0.6%)	22.60% (8.8%)	7.90% (0.0%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.10: Summary Table for Regressions - By Board Characteristics (Total Sample)

86 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	**CSPE**	**CARs**	**CSPE**	**CARs**	**CSPE**
Intercept	0.046		0.07		0.155	
	(0.507)		(2.700)*		(01.456)	
Year of Resignation	-0.091		-0.107		-0.092	
Between 1984-1986	(3.139)*		(3.871)*		(3.240)*	
% of Directors	-0.018		-	-	0.097	
that Resigned	(0.121)				(0.57)	
% of Outside Directors	0.008		-	-	-0.125	
that Resigned	(0.079)				(0.999)	
% of Outside Directors	0.01		-	-	-0.116	
on the Board (a)	(0.083)				(0.9)	
CEO or PRES or	-	-	-0.068		-0.077	
CHAIR (b)			(2.249)**		(1.838)***	
Appointed /	-	-	0.004		0.006	
Resigned (c)			(0.144)		(0.199)	
LN (market Value /	-	-	-0.003		-0.053	
Total Assets)			(0.159)		(2.142)**	
Number of firms	76	76	86	86	76	76
F Statistic for	(2.513)**	(2.513)**	(4.639)*	(4.639)*	(2.754)**	(2.754)**
Regression						
R Squared	12.40%	12.40%	18.60%	18.60%	22.10%	22.10%
Adjusted	(7.50%)	(7.50%)	(14.60%)	(14.60%)	(14.10%)	(14.10%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

a) % of Outside Directors on the Board before the resignations.
b) CEO_PRES_CH is a dummy variable that takes on the value of 1 if the CEO, President, or Chairman are among the directors resigning.
c) Appointed / Resigned is the number of newly appointed directors divided by the number of directors that resigned. Both appointments and resignations are announced at the same time.

Table 4.11: Summary Table for Regressions - By Board Characteristics for the Crisis Period (1984-1986 Sample)

41 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	CSPE	CARs	CSPE	CARs	CSPE
Intercept	0.192	1.327	-0.033	-0.385	0.182	1.686
	(1.841)***	(0.886)	(1.675)	(1.51)	(1.754)***	(1.136)
% of Directors that Resigned	0.307	3.197	-	-	0.388	5.018
	(2.339)**	(1.697)***			(2.849)*	(2.573)**
% of Outside Directors that Resigned	-0.262	-1.778	-	-	-0.297	-2.89
	(2.460)**	(1.162)			(2.684)**	(1.827)***
% of Outside Directors on the Board (a)	-0.326	-3.565	-	-	-0.322	-3.881
	(2.509)**	(1.910)***			(2.578)**	(2.169)**
CEO or PRES or CHAIR (b)	-	-	-0.015	-0.559	-0.031	-0.895
			(0.429)	(1.255)	(0.389)	(1.755)***
Appointed / Resigned (c)	-	-	0.069	0.5	0.056	0.496
			(2.031)**	(1.143)	(1.951)***	(1.209)
LN (market Value / Total Assets)	-	-	0.092	0.767	0.046	0.6
			(4.027)*	(2.298)*	(1.850)***	(1.701)***
Number of firms	39	39	41	41	39	39
F Statistic for Regression	(2.467)***	(2.393)***	(6.50)*	(3.02)**	(2.616)**	(2.627)**
R Squared Adjusted	17.50%	17.00%	34.50%	19.70%	32.90%	33.00%
	(10.40%)	(9.90%)	(29.20%)	(13.20%)	(20.30%)	(20.40%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

a) % of Outside Directors on the Board before the resignations.
b) CEO_PRES_CH is a dummy variable that takes on the value of 1 if the CEO, President, or Chairman are among the directors resigning.
c) Appointed / Resigned is the number of newly appointed directors divided by the number of directors that resigned. Both appointments and resignations are announced at the same time.

Table 4.12: Summary Table for Regressions - By Board Characteristics for the Post-crisis Period (1988-1990 Sample)

37 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	**CSPE**	**CARs**	**CSPE**	**CARs**	**CSPE**
Intercept	-0.027	0.003	0.686	0.627	0.074	1.859
	(0.161)	(0.002)	(1.829)***	(2.043)**	(.376)	(1.22)
% of Directors that Resigned	-0.37	-4.499	-	-	-0.271	-2.107
	(0.982)	(1.464)			(0.661)	(0.663)
% of Outside Directors that Resigned	0.191	2.809	-	-	0.0655	0.389
	(0.845)	(1.517)			(0.246)	(0.188)
% of Outside Directors on the Board (a)	0.204	0.947	-	-	0.042	-1.563
	(0.923)	(0.526)			(0.168)	(0.809)
CEO_PRES_CH (b)	-	-	-0.091	-1.176	-0.084	-1.445
			(1.826)***	(2.888)*	0.941	(2.081)**
Appointed / Resigned (c)	-	-	-0.022	-0.065	0.003	0.19
			(0.472)	(0.169)	(0.048)	(0.395)
LN (market Value / Total Assets)	-	-	-0.081	-0.606	-0.132	-1.01
			(2.330)**	(2.119)**	(2.891)*	(2.859)*
Number of firms	30	30	37	37	30	30
F Statistic for Regression	(0.409)	(1.028)	(2.787)**	(4.013)**	(1.801)	(2.815)**
R Squared Adjusted	4.50%	10.60%	20.20%	26.70%	31.90%	42.30%
	(0.00%)	(0.30%)	(13.00%)	(20.10%)	(14.20%)	(27.30%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

a) % of Outside Directors on the Board before the resignations.
b) CEO_PRES_CH is a dummy variable that takes on the value of 1 if the CEO, President, or Chairman are among the directors resigning.
c) Appointed / Resigned is the number of newly appointed directors divided by the number of directors that resigned. Both appointments and resignations are announced at the same time.

Table 4.13: Market Reaction (CARs) to Directors Resignations – Reason for Resignation (Total Sample)

Panel A: Portfolios based on the reason given for a director's resignation

Reason	# of Obs.	Mean	z	# Negative	p-Value	median	# in 84-86	# in 88-90
No Reason Given	25	1.10%	0.12	13	0.99	-0.10%	8	37
Liability	19	-6.30%	2.419**	14	0.06***	-5.90%	18	0
Change in Ownership	17	2.70%	0.519	6	0.33	2.50%	5	10
Restructuring	7	13.70%	2.254**	1	0.13	3.40%	3	3
Disputes Among Board	5	-0.90%	1.328	3	0.99	-0.80%	2	3
Merger	5	-1.00%	0.507	4	0.38	-1.70%	2	3
Personal	4	-9.50%	2.092**	3	0.63	-9.10%	2	2
Directors Bid for Comp.	3	1.60%	0.568	1	0.99	3.90%	2	0
Other	3	6.80%	1.353	0	0.25	4.30%	1	1

Panel B: Aggregated Portfolios based on the reason given for a director's resignation

Ownership Changes and Mergers	22	1.90%	0.216	10	0.83	1.60%	7	13
All Reasons (Except Ownership Changes, Mergers, and Liability)	20	3.60%	0.358	8	0.50	1.20%	10	9
All Reasons (Except Liability)	42	2.70%	0.402	18	0.44	1.60%	17	22

Panel C: Comparison of Aggregated Portfolios

	Difference. in Mean	Difference. in Median	t-Test	Mann-Whitney	Kolmogorov - Smirnov
Liability vs. Rest of Sample	-8.40%	-6.60%	2.47**	2.55**	7.14***
No Reason vs. Rest of Sample	1.20%	-1.10%	0.367	0.452	1.876
Ownership and Mergers vs. Rest of Sample	2.20%	2.40%	0.671	1.089	2.817
All Reasons (except Liability) vs. Rest of Sample	4.80%	2.10%	1.671***	1.711***	4.314

* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.14: Summary Table for Regressions - Reasons for Resignations (Total Sample)

86 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	**CSPE**	**CARs**	**CSPE**	**CARs**	**CSPE**
Intercept	-0.003 (0.168)	-0.156 (0.702)	0.008 (0.274)	-0.034 (0.089)	0.008 (0.284)	-0.033 (0.112)
Liability	-0.064 (1.799)***	-0.418 (1.109)	-0.074 (1.825)***	-0.531 (1.253)	-0.074 (1.934)***	-0.531 (1.261)
Change in Ownership	0.028 (0.764)	0.268 (0.684)	-	-	-	-
Restructuring	0.139 (2.652)*	1.002 (1.796)***	-	-	-	-
Change in Ownership or Merger	-	-	0.009 (0.237)	0.073 (0.180)	-	-
All Reasons Except Ownership, mergers and Liability	-	-	0.027 (0.658)	0.11 (0.26)	-	-
All Reasons Except Liability	-	-	-	-	0.071 (0.515)	0.09 (0.256)
LN (market Value / Total Assets)	-0.008 (0.380)	-0.04 (0.179)	-0.006 (0.271)	-0.021 (0.089)	-0.005 (0.248)	-0.02 (0.085)
Number of firms	86	86	86	86	86	86
F Statistic for Regression	(3.378)**	(1.514)	(1.593)	(0.672)	(2.092)***	(0.904)
R Squared Adjusted	14.30% (10.10%)	7.00% (2.40%)	7.30% (2.70%)	3.20% (0.00%)	7.10% (3.70%)	3.20% (0.00%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.15: Summary Table for Regressions - Reasons for Resignations for the Crisis Period(1984-1986 Sample)

41 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	**CSPE**	**CARs**	**CSPE**	**CARs**	**CSPE**
Intercept	-0.016 (0.634)	-0.455 (1.371)	0 (0.013)	-0.022 (0.049)	0 (0.027)	-0.033 (0.074)
Liability	-0.015 (0.466)	0.14 (0.330)	-0.031 (0.770)	0.253 (0.497)	-0.031 (0.769)	-0.251 (0.500)
Change in Ownership	0.03 (0.607)	0.014 (0.023)	-	-	-	-
Restructuring	0.008 (0.133)	0.325 (0.417)	-	-	-	-
Change in Ownership or Merger	-	-	0.008 (0.164)	-0.392 (0.632)	-	-
All Reasons Except Ownership, mergers and Liability	-	-	-0.031 (0.64)	-0.686 (1.124)	-	-
All Reasons Except Liability	-	-	-	-	-0.012 (0.287)	-0.543 (1.036)
LN (market Value / Total Assets)	0.083 (3.472)*	0.648 (2.113)**	0.086 (3.613)*	0.741 (2.441)**	0.084 (3.553)*	0.72 (2.423)**
Number of firms	41	41	41	41	41	41
F Statistic for Regression	(3.484)**	(1.290)	(3.598)**	(1.601)	(4.639)*	(2.105)
R Squared Adjusted	27.90% (19.90%)	12.50% (2.80%)	28.60% (20.60%)	15.10% (5.70%)	27.30% (21.40%)	14.60% (7.70%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.16 Summary Table for Regressions - Reasons for Resignations for the Post-crisis Period(1988-1990 Sample)

37 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	CSPE	CARs	CSPE	CARs	CSPE
Intercept	-0.008 (0.279)	-0.14 (.522)	0 (0.23)	-0.22 (0.59)	0 (0.227)	-0.222 (0.299)
Liability (a)	N/A	N/A	N/A	N/A	N/A	N/A
Change in Ownership (b)	0.042 (0.887)	0.698 (1.570)	-	-	-	-
Restructuring (c)	0.291 (3.753)*	1.854 (2.592)**	-	-	-	-
Change in Ownership or Merger (d)	-	-	0.036 (0.627)	0.643 (1.310)	-	-
All Reasons Except Ownership, mergers and Liability (e)	-	-	0.091 (1.453)	0.682 (1.252)	-	-
All Reasons Except Liability (f)	-	-	-	-	0.058 (1.161)	0.659 (1.533)
LN (market Value / Total Assets)	-0.078 (2.547)**	-0.562 (1.961)***	-0.084 (2.3)**	-0.634 (2.007)***	-0.084 (2.3)**	-0.634 (2.036)**
Number of firms	37	37	37	37	37	37
F Statistic for Regression	(6.657)*	(3.737)**	(2.154)	(1.737)	(2.864)***	(2.682)***
R Squared Adjusted	37.70% (32.00%)	25.40% (18.60%)	16.40% (8.80%)	13.60% (5.80%)	14.40% (9.40%)	13.60% (8.50%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.17: Market Reaction (CARs) to Directors Resignations – Other Announcements at Time of Resignations (Total Sample)

Panel A: Portfolios based on Other Events surrounding the director's resignation

Other Events	# of Firms	Mean	z	# Negative	p-Value	median	# in 84-86	# in 88-90
None	40	1.10%	0.4	22	0.64	-1.00%	25	14
Changes in Management	19	-0.10%	1.33	10	0.99	-0.20%	8	10
Changes in Ownership	18	4.20%	2.29**	6	0.24	2.90%	5	11
Financial Information	9	-3.00%	1.35	6	0.51	-5.50%	3	5
Earnings	5	-3.00%	0.34	2	0.99	0.70%	2	0
Other	11	-3.10%	2.11**	7	0.55	-3.50%	4	5

Panel B: Aggregated Portfolios based on Other Events surrounding the director's resignation

Other Events	# of Firms	Mean	z	# Negative	p-Value	median	# in 84-86	# in 88-90
Earnings+Fin. Info.	12	-2.60%	1.32	7	0.77	-5.30%	4	5
Changes in Man. and Owner.	31	1.10%	0.03	15	0.99	1.60%	10	18
All Other Events	46	-0.60%	0.89	23	0.99	0.30%	16	23

Panel C: Comparison of Aggregated Portfolios

	Diff. in Mean	Diff. in Median	t-Test	Mann-Whitney	Kolmog-Smirov
None vs. Rest of Sample	-1.70%	1.30%	0.569	0.147	0.913
Changes in Ownership vs. Rest of Sample	-5.10%	-4.40%	1.427	2.250**	5.662
Earnings + Financial Info. vs. Rest of Sample	3.20%	5.10%	0.766	1.321	4.405
Chan. in Man. and Owner. vs. Rest of Sample	-1.30%	-2.80%	0.441	1.129	2.033

Panel D: Portfolio of Firms where the CEO, President or COB resigned in addition to board members

Other Events	# of Firms	Mean	z	# Negative	p-Value	median	# in 84-86	# in 88-90
CEO, President or COB Resign	25	-3.30%	3.41*	16	0.23	-1.70%	9	13

Panel E: Comparison of Portfolio of Firm's officer resigned in addition to board members with Rest of Sample

	Diff. in Mean	Diff. in Median	t-Test	Mann-Whitney	Kolmog-Smirov
CEO, Pres. or COB Resign vs. Rest of Sample	5.00%	2.30%	1.559	1.374	2.988

* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.18 Summary Table for Regressions - Other Events (Total Sample)

86 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	CSPE	CARs	CSPE	CARs	CSPE
Intercept	0.003 (0.105)	-0.156 (0.702)	0.003 (0.153)	-0.089 (0.418)	0.011 (0.495)	-0.056 (0.237)
Change in Management	-0.013 (0.352)	-0.407 (1.103)	-	-	-	-
Change in Ownership	0.05 (1.326)	0.833 (2.235)**	-	-	-	-
Financial Information (other that Earnings) Disclosed	-0.034 (0.685)	-0.407 (0.821)	-	-	-	-
Other Events	-0.021 (0.464)	-0.222 (0.481)	-	-	-	-
Changes in Ownership and Management	-	-	0.012 (0.38)	0.135 (0.423)	-	-
All Financial Info. Disclosure	-	-	-(0.031) (0.723)	(0.714) -(0.312)	-	
All Other Events	-	-	-	-	-0.017 (0.565)	-0.067 (0.221)
LN (market Value / Total Assets)	0.003 (0.143)	0.015 (0.066)	0.003 (0.116)	0.041 (0.177)	0.001 (0.033)	0.021 (0.093)
Number of firms	86	86	86	86	86	86
F Statistic for Regression	(0.584)	(1.453)	(0.241)	(0.252)	(0.160)	(0.029)
R Squared Adjusted	3.50% (0.00%)	8.30% (2.60%)	0.00% (0.00%)	0.00% (0.00%)	0.40% (0.00%)	0.00% (0.00%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.19 Summary Table for Regressions - Other Events for the Crisis Period (1984-1986 Sample)

41 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	**CSPE**	**CARs**	**CSPE**	**CARs**	**CSPE**
Intercept	-0.014 (0.815)	-0.276 (1.179)	-0.017 (0.929)	-0.309 (1.322)	-0.011 (0.549)	-0.205 (0.837)
Change in Management	-0.043 (1.138)	0.528 (1.060)	-	-	-	-
Change in Ownership	0.114 (2.571)**	1.153 (1.963)***	-	-	-	-
Financial Information (other that Earnings) Disclosed	-0.084 (1.594)	-0.742 (1.059)	-	-	-	-
Other Events	-0.017 (0.364)	-0.53 (0.859)	-	-	-	-
Changes in Ownership and Management	-	-	0.023 (0.646)	0.022 (0.049)	-	-
All Financial Info. Disclosure	-	-	-0.062 (1.284)	-0.641 (1.028)		
All Other Events	-	-	-	-	-0.024 (0.783)	-0.477 (1.254)
LN (market Value / Total Assets)	0.089 (4.063)*	0.712 (2.45)**	0.087 (3.658)*	0.653 (2.13)**	0.08 (3.433)*	0.587 (1.999)***
Number of firms	41	41	41	41	41	41
F Statistic for Regression	(5.244)*	(2.471)***	(5.269)*	(2.075)	(7.085)*	(3.47)**
R Squared Adjusted	42.80% (34.70%)	26.10% (15.50%)	29.90% (24.30%)	14.40% (7.50%)	27.20% (23.30%)	15.40% (11.00%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 4.20 Summary Table for Regressions - Other Events For the Post-crisis Period(1988-1990 Sample)

37 Firms, Dependent Variables – CARs, CSPEs (t-stat in parentheses)

	Model 1		Model 2		Model 3	
	CARs	CSPE	CARs	CSPE	CARs	CSPE
Intercept	0.041 (0.995)	0.133 (.383)	0.037 (0.95)	0.176 (0.516)	0.049 (1.12)	0.143 (0.375)
Change in Management	-0.013 (0.211)	-0.174 (0.342)	-	-	-	-
Change in Ownership	-0.003 (0.048)	0.514 (1.022)	-	-	-	-
Financial Information (other that Earnings) Disclosed	-0.018 (0.231)	0.553 (0.813)	-	-	-	-
Other Events	-0.035 (0.425)	0.231 (0.327)	-	-	-	-
Changes in Ownership and Management	-	-	-0.009 (0.183)	0.206 (0.48)	-	-
All Financial Info. Disclosure	-	-	-0.029 (0.403)	-0.4 (0.635)	-	
All Other Events	-	-	-	-	-0.031 (0.611)	0.104 (0.236)
LN (market Value / Total Assets)	-0.073 (1.84)***	-0.57 (1.688)	-0.073 (1.979)***	-0.503 (1.588)	-0.071 (1.956)***	-0.537 (1.697)***
Number of firms	37	37	37	37	37	37
F Statistic for Regression	(0.853)	(0.856)	(1.433)	(1.157)	(2.316)	(1.440)
R Squared Adjusted	12.10% (0.00%)	12.10% (0.00%)	11.50% (3.50%)	9.50% (1.30%)	12.00% (6.80%)	7.80% (2.40%)

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Chapter 5: The Resolution of the Liability Crisis - Poorly Performing and Healthy Firms

5.1 Introduction

In Chapter 4 evidence is presented in support of the idea that a directors liability crisis did indeed occur. The resignations of directors during the 1984 to 1987 period elicit a negative shareholder response, a response that is significantly different than that for resignations that occur during a period of time following the crisis. This is especially true for firms that are performing poorly. This chapter is concerned with the valuation effects of the resolution of this crisis. If a crisis that had negative impact of shareholder wealth did occur, then its resolution should elicit a positive market reaction.

In July of 1986 Delaware passed legislation that permitted corporations to eliminate their directors' liability for breach of fiduciary duty. This legislation in effect had the potential to significantly alleviate the director crisis. Indeed, most states followed Delaware's lead and enacted similar legislation, and insurance companies stabilized prices and relaxed some of the restrictions on D&O liability policies. This chapter examines shareholders' response to corporate decisions to adopt a provision to the firm's charter that eliminates the directors' liability (Liability Limitations Provision (LLP)) in accordance with the Delaware law. In a sense the event examined is that which allows the firm to shield itself from the liability crisis. In addition to examining shareholders reaction in aggregate, the chapter also looks at the differences between the reactions of shareholders of healthy firms versus those in firms in financial distress.

In the aggregate, shareholders appear to view changes in the external governance structure (adoption of LLPs) as benign. However, on a firm-specific level, the market reaction is clearly different between firms, and is related to firm performance. We find that there is an inverse relationship between the market excess returns and performance. Our results suggest that the market views changes in the board of directors' external governance environment (the adoption of LLPs) as being more important to poorly performing firms than to normal/healthy firms. We provide potential explanations for this finding.

Section 5.2 provides a more detailed discussion of the legislation that permitted firms to adopt LLPs. Section 5.3 examines the likely consequences to the firm of these provisions and develops hypotheses regarding shareholders response to these adoptions. The data collection and descriptive statistics are discussed in section 5.4. Results for the various tests and the methodology used are presented in section 5.5. Section 5.6 concludes the discussion with a summary and closing remarks.

5.2 Statutory Laws Reducing Director Liability

As described in Chapter 2, the liability crisis that occurred in the mid 1980s made it difficult for firms to attract qualified directors to their boards. Shareholders, on the one hand gained increased access to the courts and increased awards in their suits against their directors yet on the other hand suffered the consequences of loosing directors and not being able to replace them with qualified candidates. Thus, the balance between the shareholders' rights to hold directors liable for their actions and the need for attracting qualified directors was

disturbed. Without this balance firms suffered the possibility of serious disruptions in director monitoring and guidance, as directors became focused on their potential liability rather than on the best interests of the firm.

In response to the liability crisis, and in an attempt to strike a new balance between shareholder rights and maintaining stability on the board, several state governments passed legislation limiting director-liability. These laws narrow the scope of what directors can be held liable for. Two of the most popular forms of legislation introduced are charter-option statutes and self-executing statutes. Indemnification provisions have also been adopted in most states.

The first charter-option statute, was signed by the Governor of the State of Delaware on June 18, 1986, as an amendment to section 102 of the Delaware General Corporate Law to add a new subsection (b)(7) . The amendment became effect July 1, 1986 and permits a Delaware corporation to include in its certificate of incorporation a provision limiting or eliminating a director's personal liability to the corporation or its stockholders for breach of his or her fiduciary duty of care as a director in certain circumstances. The new section 102(b)(7) was intended to assist Delaware corporations attract and retain highly qualified individuals to serve as directors. [R. F. Balotti and M.J. Gentile (1987)]. Similar charter amendments were subsequently adopted by at least thirty other states.

These statutes effectively eliminate directors' liability to stockholders for monetary damages for breach of fiduciary duty, with certain exemptions. These exemptions are usually for breach of loyalty to the corporation or its shareholders, acts performed not in good faith or that constitute intentional misconduct, and illegal activities. Thus, directors are protected against claims by shareholders for

gross negligence in performing their duties. Since, according to the Wyatt survey, 47% of all claims against directors and officers, originate with shareholders, this is substantial protection.

Charter-option statutes require shareholder approval for limiting directors' liability. Shareholders must thus vote to amend their corporate state charter to include these limitations that do not protect directors from lawsuits filed by non-shareholders. A few states (Louisiana, Maryland, Nevada, and New Jersey), have allowed these liability limitations to include acts of officers in addition to directors. These provisions were adopted by corporations with the explicit intent of retaining their existing directors and attracting new qualified directors in a highly litigated environment were directors' and officers' liability is either not available or extremely expensive.

The adoption of provisions limiting directors' liability is identified explicitly in proxy statements. The case of Outboard Marine Corporation is typical: Its proxy statement of Jan. 15, 1987 states:

> "Management believes that the proposed amendments (limitations of liability and indemnification) are desirable in order for the Corporation to be able to continue to attract and retain responsible individuals to serve as its directors, officers, and agents in light of the present difficult environment in which such persons, particularly directors, must serve. In recent years investigations, claims, actions, suits or proceedings (including derivative actions) seeking to impose liability on, or involving as witnesses, directors and officers of publicly held corporations have become increasingly common....Compounding the problem, however, has been the increasing difficulty and expense of obtaining directors' and officers' liability insurance..."

In contrast to the charter-option statutes, states adopting self-executing statutes (Indiana, Ohio, Florida, Wisconsin, and Maine), do not require

shareholder approval of the liability limitations specified above; they are automatically applied.

In addition to limiting the liability of directors, some states have expanded the corporation's ability to indemnify its officers and directors against all monetary damages and legal costs incurred from suits brought against them. These indemnification provisions, which must be approved by shareholders, allow for the use of stockholders' funds (the corporation's cash) to pay stockholders and lawyers in the event of a legal battle. Thus, in essence, stockholders pay the expenses themselves and the lawyers appear to be the only party to gain from the process. In cases where third parties sue managers or directors, it is stockholders that ultimately pick up the tab.

The relevant question at this juncture is whether the limitation of director liability and the institution of indemnification provisions achieve the appropriate balance between shareholder rights and increased security for directors. Shareholders themselves have provided some answers to this question. Liability limitation provisions have been adopted by large numbers of corporations, winning large majorities of shareholder votes. However, since shareholders rarely vote against management, the true attitude of shareholders towards these provisions, as well as towards indemnification provisions must be measured by the market's response to their adoption.

Bhagat, Brickley, and Coles [1987] find that shareholder wealth is not negatively effected by the adoption of indemnification clauses or by the purchase of D&O liability insurance by the corporation. In order to determine the effect on shareholder wealth of the liability limitation provision adopted by Delaware,

Janjigian and Bolster [1990] test the returns on a group of Delaware firms around the date of the legislature's adoption of the charter option statues in 1986. They find no statistically significant response to the passage of the statute, although a control group of non-Delaware corporations did somewhat better during this period than the Delaware group. In addition, they test the market's response to individual firms adopting the limitation of liability provision and find no significant reaction on either the proxy mailing date or the shareholders meeting date. They conclude that director liability-limitation does not significantly affect shareholders' wealth. Netter and Poulsen [1989] reaffirm these results. They find no significant negative reaction to shareholder wealth when liability-limitation provisions are adopted. It should be noted that following the adoption of the Delaware statute, the number of corporations reincorporating in Delaware rose by 28% [Cottingham (1988)]. Netter and Poulsen [1989] find that these corporations' decision to reincorporate in Delaware had no adverse effect on shareholder wealth.

Thus, it can be concluded that on average, limiting the liability of directors has no significant negative effect on shareholders' wealth while at the same time it provides the necessary protection that allowed directors to return and serve on corporate boards. This paper affirms the results of Netter and Poulsen [1989], and of Janjigian and Bolster [1990], with a larger and more diverse sample. More importantly, however, it extends these results to show that the wealth-effects arising from the adoption of liability-limitation provisions, are different for firms with different performance.

The sample in this study differs from that used by Janjigian and Bolster which includes only Delaware firms, by including close to 50% non-Delaware firms. Netter and Poulsen's sample is also limited to S&P 500 firms, and only includes firms that indemnify directors without limiting their liability. In contrast, this sample includes firms of various sizes as well as firms that only limit the directors' liability. Our sample is also larger than those used in these two studies. Both previous studies limit themselves to event study methodology. This paper starts with an event study, but the emphasis is on cross-sectional regressions that examine the CARs in light of firm-specific characteristics.

5.3 THE POTENTIAL IMPLICATIONS OF ADOPTING LLPS

In voluntarily adopting LLPs, shareholder give up their right to discipline their directors for breach of fiduciary duty. However, LLPs may lower outside directors' costs associated with serving on the board thus, increasing the firms ability to retain and attract high quality outside directors. The relative importance of these two alternative effects is an open question.

Previous studies (Janjigian and Bolster [1990] and Netter and Poulsen [1989]) have documented that the adoption of LLPs is not associated with significant stock price changes. This is consistent with the argument that shareholders, on average, view the adoption of LLPs as an equal trade-off between the loss of shareholder rights and increased protection for directors.

Unfortunately, the analysis adopted by these studies is limited in that it ignores that the trade-off might be dependent on firm specific characteristics. More specifically, the legal liability faced by directors of financially distressed

firms is generally considered to be greater than for directors in successful firms [see, for example, Brown (1991)] leading to the possibility that the protection offered by LLPs, is more valuable to poorly performing firms. Directors in such firms face an environment that is at best ambiguous regarding their role and responsibilities. As discussed in Chapter 3 financial distress alters the rules and regulations governing board behavior and traditional governance principles may not apply. In addition, the fact that the firm is in distress implies that shareholders are likely to have suffered significant losses, making a lawsuit more likely and costly than for firms not financially distressed. This higher liability, coupled with the increased litigation of the mid-1980s had the potential effect of significantly increasing the costs of serving as a director on the board of a poorly performing firm.

In addition, Chapter 3 discusses the relative importance of outside directors to firms in financial distress. This importance is derived from their contribution to the dynamics of the board, as well as their strategic importance during financial distress. Therefore, shareholders' adoption of LLPs cannot be explained solely from the perspective of the outside directors' cost of serving on the board. Implicitly we are assuming that there are advantages to having outside directors on the board. While these advantages probably exist for all firms, the expanded power and added responsibilities of directors of financially distressed firms may enhance their value to shareholders. Hermlain and Weisbach (1988) find that in firms performing poorly inside directors are replaced by new outside directors and that for poorly performing firms the ability to attract new directors is important. Evidence on the relationship between good performance and outside

directors is contained in the Karpoff-Rice (1989) study of ANSCA firms (firms established under the Alaska Native Claims Settlement Act of 1971). These firms were not allowed to have outside directors and this is one factor contributing to their poor performance. Outside directors are also instrumental in replacing the management responsible for the firm's weak condition (Weisbach (1988) finds a higher correlation between CEO turnover and performance for those firms in which outsiders dominate the board.)

In addition, as discussed in Chapter 3, the existence of outside directors on boards of companies in distress may make it easier for these companies to sell the firm or privately refinance it, thereby avoiding the costs associated with bankruptcy. Thus, directors are significant players in the attempt of poor performing firms to survive. LLPs, by reducing the threat of directors' personal liability, can not only reduce the costs associated with serving on the board but also possibly facilitate a more efficiently functioning board.

Alternatively, if the directors on the board are ineffective, providing them with additional protection might have negative implications for the firm's future, especially for poorly performing firms. Such boards would become more insulated from shareholders, and less likely to work in their best interests. Because of the above mentioned importance, and increased responsibilities of directors in financially distressed firms, the effect of the boards insulation could be especially detrimental to shareholders of such firms. If this were true, we would expect shareholders of poorly performing firms to react negatively to the adoption of LLPs.

We contend that the market's reaction to the adoption of LLPs depends on firm-specific characteristics, specifically financial performance. Firms adopting LLPs alter the governance structure in a way that potentially increases the board's ability to function. Although boards in both healthy and poorly performing firms face the threat of personal legal liability, the implications for firm value of adopting LLPs is not the same in both cases. Thus,

H1: Shareholders of low-performance firms value the protection offered to directors by LLPs more than do shareholders of high-performance firms.

All corporations in our sample adopted LLPs to the full extent of the state law but some limitations included additional protection to both directors and officers in the form of indemnification. While LLPs protect directors from shareholders' suits, indemnification protects them against all suits including third-party suits. In addition, most provisions expanded the indemnification protection to include officers. Thus, the issue of indemnification, along with limitation of liability, poses potentially serious problems to shareholders.

Nine firms in our sample chose to limit the liability of officers and directors. Shareholders in these firms are thus deprived of a tool for disciplining managers and directors. They also lose the ability to be reimbursed for losses they may suffer due to managerial mismanagement. In addition, there is no clear offsetting benefit since there was no "officers' crisis"; that is, officers were not resigning or refusing to take jobs due to the D&O liability crisis. We expect

therefore that the adoption by firms of provisions limiting officers' liability will detract from any positive value the provisions have when limited to directors.

To include the limitation-data in cross-sectional regressions, LLPs are coded in the following manner:

Type 1 LLPs: those limiting the liability of directors only.

Type 2 LLPs: those limiting the liability of directors and expanding the indemnification of directors and officers.

Type 3 LLPs: those limiting the liability of directors and officers, and expanding the indemnification of directors and officers.

Our hypothesis regarding these provisions is thus:

H2: Ceteris paribus, the cumulative abnormal returns (CARs) are inversely related to the LLP-type: type 1 should be perceived by the market as the most valuable and type 3 as the least.

An additional element that may determine the specific nature of the provision adopted by the firm is its state of incorporation. While in most cases the statutes adopted by the various states allowing for the elimination of director liability are very similar, they are not exactly the same. Thus, an attempt is made in our tests to control for any possible state-specific effects.

The number of outsiders on a corporation's board and their ownership stake can influence shareholders' reaction to the adoption of a provision limiting director-liability. The value added by the adoption of such a provision is the ability to retain whatever number of outside directors are already on the board.

The question is whether the value that shareholders place on the presence of outside directors is related to the number (or percentage) of outsiders on the board. If there are already a large number of outsiders, director resignations or the inability to attract new outside directors will not necessarily have a major effect on the outside directors' influence as a group. Thus, one would expect an inverse relationship between shareholders' response to the firm's adoption of directors' liability-limiting provisions and the percentage of outsiders on the board.

An ambiguity exists regarding the effect of outside directors' stock ownership on shareholders' response. If outsiders have a substantial stake in the firm, this provides them with the incentive to remain on the board even with the risks of increased liability. In this case, the provision limiting the directors' liability is less valuable. On the other hand, ownership of stock by outside directors aligns their interests with those of shareholders, thus increasing the directors' value. This increased value of outside directors would increase the value of the liability-limiting provision. Thus, no unambiguous hypothesis can be derived.

Analyzing the effect insiders' ownership has on shareholders' response to the adoption of this provision is equally complex. As insider ownership in the firm increases, the agency costs between insiders and shareholders are reduced (convergence of interest hypothesis) [Jensen and Meckling (1976)]. If the role of outside directors is primarily that of monitoring, then we would expect that their value will increase as the agency costs between insiders and shareholders increase. However, the more recent literature has pointed out potentially offsetting costs associated with increased ownership: insiders increasingly

entrench themselves as their ownership stake increases (the entrenchment hypothesis) [Demsetz (1983) and Fama and Jensen (1983)]. It is perhaps because of these offsetting forces that the relation between ownership by all officers and directors and Tobin's q is non-linear [Morck, Shliefer, and Vishny (1988)]. Given this finding, and because outside directors serve to reduce monitoring costs, the value of outside directors would also be expected to be non-linear in relation to the ownership stake of insiders. Unfortunately, our data sample is not large enough (or varied enough) to permit a test of this hypothesized non-linearity. Thus, we limit ourselves to testing for a possible linear relation between insider ownership and the value shareholders place on outside directors. That is, we are testing only the monitoring value of outside directors under the assumption of the convergence of interest hypothesis (as insider ownership increases, their interests converge with those of stockholders and the importance of the monitoring performed by outside directors is reduced). Under these assumptions, we would expect to find that,

H3: There is an inverse relation between the value shareholders place on outside directors and the level of insiders' stock-ownership.

5.4 THE DATA AND SAMPLING PROCEDURES

5.4.1 Identification of the Relevant Firms

Using Lexis/Nexis, Disclosure, S &P News Retrieval Service, we search and identify 182 firms that included a LLP clause in their proxy statements between July 1986-December 1988. The on-line databases are also used to

confirm that the proxy statement contains the first announcement of the boards' intention to adopt a LLP. For all of these 182 firms the proxy statement is, in fact, the first announcement of the firm's intentions.

From this group we omit firms: *a)* not appearing in the NBER database (discussed below), *b)* not having daily returns on CRSP, *c)* not having proxy statements and *d)* those adopting self-executing statutes. Firms executing self-executing statutes were deleted because the LLPs for these firms went into effect immediately after their state legislatures adopted them and not at the time of the proxy announcements. Omitting 62 firms for one or more of these reasons, we are left with a final sample of 120 firms that are then analyzed.

5.4.2 Tobin's q and Operating Performance Measures

One proxy for firm performance is Tobin's q. This "stock" measure of performance embodies (capitalizes) investors' expectations of future performance. A firm with a high q has economic rents and can avoid financial shortfalls by raising fresh capital. Low-q firms have little (and perhaps even negative) rents and this can spell financial problems leading possibly to financial distress.

Tobin's q is computed using the Manufacturing Sector Master File, 1959-1987, published by NBER. This database uses inflation-adjusted values as proxies for replacement costs and adjusts the book values of long-term debt for the debts' age structure using a methodology similar to that of Lindenberg and Ross (1981) and developed by Hall (1990). By using the market value of equity and proxies for the value of debt and preferred stock, the database provides both a market value proxy and a replacement cost proxy for over 2500 manufacturing

firms, with one to twenty-nine years of data each. The database allows for a relatively simple calculation of Tobin's q, although it limits the analysis to manufacturing firms (SIC codes between 2000 and 3999). However, manufacturing firms allow for a wide diversity in values of q. Tobin's q is calculated for each firm in the sample based on its market value and replacement cost of assets at the end of the year preceding the proxy mailing.

As an alternative specification of performance, we employ the operating performance "flow measures" used by DeAngelo and DeAngelo (1990). Firms with 5 years of positive "bottom line" income and pre-tax operating income are considered firms with high operating performance. Firms with three years of negative net "bottom line" income or negative pre-tax operating income during the five years preceding the proxy year are defined as firms with low operating performance. A net "bottom line" loss occurs when Compustat Item 18 (income before extraordinary items and discontinued operations) plus Item 48 (extraordinary items and discontinued operations) is less than zero. A pre-tax operating loss exists when Item 13 (operating income before depreciation) minus item 14 (depreciation expense) is less than zero. Earnings information required to derive these performance measures and information on the size of the firms in our sample are also available from the NBER data base.

As an additional accounting performance measure, operating profits to total assets, adjusted for industry by subtracting the mean value for the corresponding two-digit SIC code for the firm's industry, is used. This is a measure of the firms current operating performance. Since a firm's performance is often evaluated in comparison to the performance of similar firms, the

adjustment for industry is made in order to control for possible industry wide effects. The operating performance measure is calculated for the year preceding the adoption of an LLP.

5.4.3 Confounding Events in Proxy Statements

Proxy statements are further analyzed to learn more about *a)* the LLP-type, *b)* the ownership stakes of inside and outside directors and *c)* other potentially confounding events.

Our event date is the mailing of a proxy statement. Proxy statements contain other amendments or information that may effect the shareholders' response to its mailing. In general, we consider any provision or announcement, except for the announcement of director elections and the approval of an auditor, as a confounding event. Our goal is to control for these confounding provisions and to determine their effect, if any, on our results.

Each firm's proxy statement is carefully studied and the potentially confounding provisions are identified. 54 firms were identified as having at least one confounding provision. Of these 54 firms 18 had more than one confounding event. Three main types of confounding provisions are identified:

Type 1 provisions: all announcements and provisions relating to stock option plans, incentive plans, and managerial compensation (29 such firms). An example from the proxy statement of Crane Co. (April 27, 1987) is: "*To approve the amendment of the Company's 1984 Stock option Plan making an additional 750,000 shares available for grant and certain technical changes to reflect the 1986 Tax reform Act.*"

Type 2 provisions: all announcements authorizing the board to issue new stock (28 such firms).These provisions are all very similar. An example from the proxy statement of Avery International Corporation: *"To consider and vote upon an amendment to the Company's Certificate of Incorporation to increase the number of authorized common shares which may be issued from 100,000,000 to 200,000,000."*

Type 3 provisions: all other announcements and provisions deemed to be potentially confounding (17 such firms). This group includes: two firms recommending the adoption of "fair price" provisions, four firms announcing their intent to split their stock, two firms recommending the re-classification of the board of directors, one case of a recommendation to adopt a new investment plan, one announcement of a merger with the firms subsidiaries, one case of an announcement of a repurchase plan, and six other miscellaneous cases (provisions relating to preferred stock, raising required vote for changes in by-laws, changes regarding preemptive rights, elimination of stockholders' actions by written consent and the elimination of a staggered board).

5.4.4 The Total Sample

The final 120 firm sample includes firms incorporated in 17 different states with over 50% incorporated in Delaware (Table 5.1). Over the sample period 14 of the proxies first announcing the planned adoption of LLPs were mailed in 1986, 70 in 1987, and 36 proxies were mailed in 1988. As expected, the month with the highest concentration of mailings was March, with 41 (34%) of

the 120 proxies mailed during March 1987, and 19 (16%) mailed during March 1988.

Table 5.2 summarizes the data. Tobin's q for this sample ranges from a low of 0.36 to a high of 6.0. The mean value of the qs in the sample is 1.46 (standard deviation: 0.9; median: 1.17). The median value and the clustering of qs around unity are consistent with Tobin's hypothesis that in equilibrium firms have a q-value close to one.

The mean percentage of outside directors in our sample is 61% (standard deviation: 17%, median: 63%). We follow the taxonomy in Weisbach (1988) in classifying directors: Inside directors are full time employees of the corporation, outside directors are those directors who have no extensive business or personal dealings with the corporation, and gray directors constitute the rest (have extensive business or personal relationships with the corporation, but are not employees).

The distribution of the percentage of outside directors sitting on boards of corporations in this sample is similar to that in Weisbach (1988). Outside directors in this sample hold very little if any ownership stake. On the other hand, CEOs owned on average 6.1% of the stock of their corporations. CEO ownership ranges from 0% to 71%.

Data on the book value of the firms total assets and the value of their common stock are also contained in Table 5.2. Both variables are computed for the end of the calendar year preceding the mailing of the proxy announcing the LLP.

5.4.5 Sub samples and their descriptive statistics

To further test our main hypothesis that a firm's abnormal returns are related to its performance we formed several additional sub samples. Descriptive statistics for the sample as a whole and for some alternative sub sample are presented in Table 5.3.

Samples defined by q-ratios: To test for the effect of q-ratios on abnormal returns we created two sub samples. In the first, we segmented the 120-firm total sample into two subsets, one containing firms with the 60 lowest q-ratios [Low q(50%)], and the other with firms with the 60 highest qs [High q(50%)]. The second set contains a subset of the 30 firms with the lowest qs [Low q (25%)] and a subset with the 30 firms with the highest qs [High q(25%)].

The High q (50%) sample has a mean q of 2.04, while the sample of low-q (50%) firms has a mean q of 0.9. In other aspects the samples are somewhat different; for example, the ownership by all officers and directors is higher for low-q firms than it is for high-q firms (statistically significant at the 10% level).

Samples defined by performance: We form two sub samples: high performance firms (HOP) and low performance firms (LOP) using the DeAngelo & DeAngelo (1990) measures of performance. The 120 firms in the sample contain 66 HP firms and 16 LP firms.

The LOP firms have a smaller percentage of outside directors than HOP firms. However, the percentage ownership by all officers and directors is larger for LOP firms.

Samples defined by performance and q: To better distinguish between the implications of our performance specifications, we construct four samples: high-q firms with high operating performance (HQHP), high-q firms with low operating performance (HQLP), low-q firms with high operating performance (LQHP), and low-q firms with low operating performance (LQLP). We define high q as q-ratios above the median value for the total sample and low q as q-ratios below the median. The 66 HP firms and the 16 LP firms are then grouped into four categories to reflect both q-ratios and operating performance. This classification yields 43 HPHQ firms, 23 HPLQ firms, 3 LPHQ firms and 13 LPLQ firms.

For low-performance and/or low-q firms the percentage of outside directors is lower than otherwise while the percentage of shares owned by all officers and directors is higher. These differences are for the most part significant at various levels when using a standard t-test and the Mann-Whitney and Kolmogorov-Smirnov nonparametric tests. The possible effects of these differences will be taken into account in the cross-sectional regressions described subsequently.

Samples defined by confounding events: We designate the sample of 54 firms with potentially confounding events as the contaminated sample and the sample of 66 firms without potentially confounding events as the uncontaminated sample.

Both samples posses similar characteristics (see Table 5.3). Using a standard t-test and various non-parametric tests we could not differentiate the two samples based on q-ratios or ownership. The one difference between the samples is size; the uncontaminated sample contains larger firms (as measured by Book

Value of Assets) than does the contaminated sample. The mean Book Value of Assets for the Uncontaminated and Contaminated firms is $4,584,000 and $1,493,000 respectively. Using a standard t-test they are significantly different at the 10% level (p = 0.076). Using the Kolmogorov-Smirnov nonparametric test the samples are significantly different at the 5% level (χ^2= 6.885, DF = 2).

Samples defined by percentage outside directors: Following Weisbach (1988), we define a high percentage of outside directors as >60% and low as ≤ 60%. The total sample of 120 firms contains 66 firms with high percentage outside directors and 54 firms with low percentage outside directors.

The sub sample with a high percentage of outside directors has a mean of 72% outside directors while the sample with low percentage outside directors has a mean of 46% outside directors. The Tobin's q for both samples is very similar. Consistent with Weisbach [1988], the sample with low percentage of outside directors on the board has a substantially higher level of ownership by officers and directors than does the sample with a high percentage of outside directors.

5.5 Methodology and Results

5.5.1 Event Study

The methodology described in Chapter 4 section 4 is adopted. The total sample and the various sub samples are examined using standard event study methodology to determine shareholders' reaction to the adoption of LLPs. We use the event study i) to determine the abnormal return over the total sample of 120 firms, ii) to determine the abnormal returns on various sub samples of firms and

iii) to produce firm-specific cumulative abnormal returns (CARs) and cumulative standardized prediction errors (CSPEs) for use in the cross-sectional regressions described later.

The date of the proxy mailing announcing that the LLP will be presented for shareholder vote at the next shareholders' meeting is chosen as the event-day. A period of 3 days following the event-date is chosen as the event-window and abnormal returns for this period are estimated using an OLS market model. An estimation period of 150 days prior to the event is used. Since regular shareholder meetings and the mailing of proxy statements are an expected event, the expected abnormal return around the mailing of the proxy statement is zero [Brickley (1986)]. Thus, the null hypothesis for all our samples is that no abnormal market reaction will occur surrounding the mailing.

Information regarding this event may leak before the proxy mailing [Linn and McConnell (1983)]. However, we are unable to identify any news releases before the proxy mailing or the dates for the actual meeting where the directors adopted the amendment. It should be noted that even in the case studied by Linn and McConnell, the results for the window around the proxy mailing date are consistent with the results for the window that includes the earlier leakage. Because of the uncertainty concerning the proxy mailing date, and to control for the possibility of information leakage, an event studies over two additional and larger windows (-30 days to +10 days and 0 to +10 days) are also conducted. Results for these windows are similar to those conducted in the more narrow window and are therefore not reported here.

5.5.2 Results of the event study

Table 5.4 summarizes the results. The results for the total sample (120 firms) are consistent with earlier findings [Netter and Poulsen (1989) and Janjigian and Bolster (1990)]. There is no evidence that the adoption of LLPs has any negative effect on shareholder value. Any effect that does exist is positive, yet not statistically significant.

The results for the samples of firms based on low performance, segmented either by low-qs or by low operating performance, all show a positive wealth effect associated with the adoption of LLPs for directors. All these samples exhibit positive CARs that vary from 1.47% [for the low q (50%) sample] to 5.53% (for the LQLP sample) rejecting the null hypothesis of zero returns at a statistically significant level of 5% or 1%. A sign test for the number of positive returns in each sample provides further statistical evidence for this result. For the samples of high performance firms the null hypothesis of zero abnormal returns cannot be rejected by any of our tests.

We also verified that this relationship between CARs and firm performance is not due to spurious correlation. If poorly-performing firms have poor stock performance during the market model estimation period we would expect their regression alphas to be lower than those for healthy firms. This would cause the abnormal returns to appear higher for the poorly-performing firms. This possibility is no cause for concern here; our sample exhibits no significant correlation between alphas and Tobin's q.

Table 5.5 presents the differences in the excess returns between corresponding sub samples to determine whether they are significantly different from one other. In every comparison between high performance and low performance samples there is a significant statistical difference at the 1% to 10% level. We use three tests to establish the statistical significance of the difference between the samples; an unpaired t-test, a Mann-Whitney unpaired z-statistic and a Kolmogorov-Smirnov two-sample χ^2 statistic. These results provide significant evidence that investors in low- performance firms value LLPs more than shareholders in high-performance firms.

The samples segmented by percentage of outside directors show no significant return and no statistical evidence is present of a differential response between the two samples. Thus, the percentage of outside directors does not affect shareholders' response, and no relation between the percentage of outside directors and the value shareholders place on the LLP can be established.

Even though the uncontaminated sample has a significant positive CAR there is no significant difference between the contaminated and uncontaminated samples, suggesting that confounding events are not responsible for our results.

5.5.3 Cross-sectional Regressions

To further examine any potential linkages between the value of the LLP and firm-specific attributes we run several cross-sectional OLS regressions. The dependent variable in these regressions is the cumulative abnormal return (CAR) following the proxy mailing. Since our main hypothesis refers to the firm's performance, Tobin's q and our other measures of performance are the

independent variables. In addition, a number of controlling variables are used as independent variables. Because of the potential for heteroscedasticity, each stock's CSPE is used as a dependent variable along with it's CAR.

5.5.3.1 Firm Performance

Tables 5.6 and 5.7 summarize the results of nine cross-sectional regressions examining the relation between performance and the market's response to the mailing of a proxy statement announcing the firm's intention to adopt a LLP. All nine regressions provide evidence suggesting the rejection, at the 1% level, of the null hypothesis that there is no relationship between the two. In all the regressions in Table 6 the coefficient for Tobin's q is negative and statistically significant. To verify that the results are not effected by the fact that this variable is truncated at zero the natural log of Tobin's q was used instead of Tobin's q producing the same results (not reported here). These results provide statistical support for our hypothesis (H1) regarding the inverse relationship between Tobin's q and CARs surrounding this event. This is also consistent with the evidence from the event studies described earlier.

Regression 2 through 5 in Table 5.6 provide evidence on the influence of the DeAngelo and DeAngelo (1990) performance measures on shareholders' response. The dummy variable LOP takes on the value of 1 for firms with at least three years of negative performance in the five-year sample period. The dummy variable HOP takes on the value of 1 for firms with 5 years of positive performance in the five-year sample period. Regressions 2-5 suggest that the firm's past performance has an influence on the value shareholders attribute to

LLPs aimed at enabling the board to function unimpeded by excessive lawsuits. The coefficient for the LOP variable is positive and significant at the 1% level in all four regressions. The coefficient for HOP, while positive, is much smaller and only marginally significant in two of the four regressions. These results are consistent with our hypothesis as well as with the results regarding Tobin's q. They provide additional evidence that owners of poorly performing firms value the protection offered to their boards more than owners of firms that are doing well.

The LOP variable is likely to be proxying for a similar effect as Tobin's q. The mean and median values for Tobin's q of the 16 firms with negative performance are statistically significantly lower than for the sample as a whole (mean:1.031; median: 0.71; Std: 0.862) based both on a standard t-test and on the nonparametric Mann-Whitney and Kolmogorov-Smirnov tests. In addition, these averages are influenced by an outlier, one firm with a q of 4.0 and yet having a negative return. Furthermore, there is collinearity between the q variable and the dummy variable LOP. A regression with the q-ratio as the dependent variable and the dummy variable as the independent variable is statistically significant at the 5% level. The q-ratio and the dummy variable are thus linearly related; the t-statistics are biased downwards and are highly sensitive to sample size and composition.

Regressions 1-4 in Table 5.7 show that firms with both low q-ratios and LOP have a positive reaction to the adoption of LLPs. Firms with both performance measures particularly low are in an especially poor condition and are prime candidates for financial distress. Thus, it is entirely plausible that it is the

value attributed to the boards' ability to take on risks and act effectively in financial distress that explains these results.

Table 5.8 provides additional evidence regarding the relationship between performance and shareholders' response to the adoption of LLPs. In addition to the event window used in the regressions in tables 5.6 and 5.7, results for event windows spanning the 10 days following and from 30 days before to 10 days after the announcement of adoption of an LLP, are presented. Table 8 also presents results for an additional performance variable; operating performance divided by total assets. Model 1 and 2 provide evidence that Tobin's q's significance is dependent on the event window chosen. However, the LOP variable is significant at the 1% or 5% and positive for all event windows. This provides further evidence of the relationship between performance and shareholders response to LLPs. Models 3 and 4 provide future evidence of this relationship using a different performance measure. Operating income over total assets is, as hypothesized, negative and significantly related to CARs for all three event windows. When adjusted for industry, the result remains for the (0,3) and (-30,+10) windows but not for the (0,+10) event window. These results confirm the relationship between performance and CARs

The results in tables 5.6 and 5.7 are robust to the varying control variables used in the regressions. The next two sections discuss their significance.

5.5.3.2 Nature of the LLP

Regressions 3 and 5 in Table 5.6 and 2 and 4 in Table 5.7 test H2. Although the sign for the coefficient of the provision variable is negative as

hypothesized, it is not statistically significant. An alternative methodology was used to verify these results, in which the provisions variable was replaced by two dummy variables for the indemnification clause and for the inclusion of officers in the limitations of liability provision. The results are similar to those presented in Tables 5.6 and 5.7. Both coefficients are negative but not statistically significant.

These results could be a consequence of the small number of firms in the sample that limited the liability of both officers and directors (only 9 out of 120 firms). This evidence, that shareholders are not reacting differently to firms that both indemnify and limit directors' liability is consistent with earlier findings [Bhagat, Brickley, and Cole (1987)] that indemnification of directors is neither a significant positive or negative event. Many firms had indemnification provisions in place and these new provisions were, for the most part, extensions and expansions of their existing indemnification agreements with managers and directors.

To identify effects associated with the state of incorporation and possible differences in provisions between states, regressions 3 and 5 in Table 5.6 and regressions 2 and 4 in Table 5.7 contain a dummy variable, DEL, that takes on the value of 1 if the firm is incorporated in Delaware and 0 otherwise. Delaware is singled out because over 50% of the firms in the sample are incorporated there. The coefficient for DEL is not significant and we conclude that incorporation in Delaware at that time had no effect on shareholders' reaction to the limitation placed on directors' liability.

To control for possible effects from firm size, the natural log of each firm's book value of total assets (in millions) is also used in these regressions. There is no evidence to suggest that our results are related to firm size. The market value of the firm's common stock when used as a proxy for size also leads to the same conclusion.

5.5.3.3 Outside Director Representation and Ownership

To determine whether shareholders in firms having a large percentage of outside directors value the provision limiting directors' liability more than other firms with a lower percentage, the percent of outside directors is used as an independent variable in regressions 4 and 5 in Table 5.6, and 3 and 4 in Table 5.7. As discussed earlier, the expected value of the coefficient for this variable is negative. Our results are consistent with those for the event study, and show no relation between the percentage outside directors and the value shareholders place on outside directors. A similarly insignificant result is obtained in these regressions for the outside directors' ownership variable, suggesting that it is not the number of outside directors on a given board or their ownership stake that determines their value in this context, but possibly the characteristics of the firm itself, of which q-ratio and operating performance are identified in this study.

The question of the influence of insider ownership on shareholders' valuation of outside directors is addressed in regressions 4 and 5 in Table 5.6 and 3 and 4 in Table 5.7. The coefficients for insider's ownership are always negative, although not statistically significant, consistent with the expected negative relationship under the convergence of interest hypothesis assumption. However,

the coefficient for CEO ownership is indistinguishable from zero, suggesting no effect. There are two potential explanations for this result: one, the need for monitoring is not linearly related to CEO ownership [this argument is similar to that presented in Morck, Shliefer, and Vishny (1988)] and two, shareholders are valuing outside directors because of their guidance and not their monitoring function. (To test for the non-linear relationship between insider ownership and shareholders response to the adoption of provisions limiting director liability, a larger sample than is available would be needed with more diversity in ownership among insiders.) The options are not mutually exclusive and one would expect that both are influencing our results.

In addition to the regressions described in Table 5.6 and 5.7, we attempted to use other ownership variables such as ownership by all officers and directors, and natural log transformations of the variables in these tables, as independent variables. In all the different regressions we attempted, the ownership variables are never statistically significant, while Tobin's q and the other low performance variables retain their sign and significance.

5.5.3.4 Confounding Events

Table 5.9 duplicates regressions 1 and 4 in Table 5.7 for the uncontaminated and contaminated samples. By examining the regression results for these sub samples we can establish whether our results are a consequence of other events (other provisions and announcements in the proxy statements) or primarily a result of the adoption of the LLPs. The results for the uncontaminated sample in the regressions are very similar to the results obtained using the total

sample. However, the contaminated sample shows no relationship between the dependent and independent variables. These results, which are consistent with the event study findings, lead us to believe that the existence of contaminating events in the sub sample of firms does not effect our results in any significant manner.

An alternative method for determining the possible effects of confounding provisions is to identify the existence of these events with a dummy variable and to regress the CARs on this dummy variable and the performance variables used in our other regressions. Our tests using this methodology (not reported here) show that these provisions have no significant effect on the CARs, providing further evidence that they are not influencing our results.

5.6 Concluding Comments

This chapter has documented an inverse relationship between the market's reaction to firms' announcements of plans to adopt directors' liability-limitation provisions and their financial condition as measured by either Tobin's q or operating performance. While the adoption of these provisions are viewed as insignificant by the shareholders of firms with high q and good performance, they are perceived as very valuable for low-q and poor-performance firms. These findings are consistent with the findings of earlier research documenting the importance of the board of directors in under-performing firms. At least for poorly performing firms, these provisions have contributed to restoring the delicate balance between two forces: shareholders' need to hold the board of

directors accountable for its actions on the one hand and, on the other, the board's ability to function effectively without risking the personal wealth of its members.

Table 5.1: State of Incorporation of Firms in the Sample

While most states allowed firms to limit the liability of directors only, some states allowed for provisions that limit the liability of officers and directors.

State	Number in Sample	Limitation of Liability for:
DEL	61	Directors Only
NY	22	Directors Only
PA	9	Directors Only
MA	5	Directors Only
NJ	4	Directors & Officers
MD	3	Directors & Officers
MI	3	Directors Only
CA	3	Directors Only
NV	2	Directors & Officers
AZ	1	Directors Only
GA	1	Directors Only
IA	1	Directors Only
KA	1	Directors Only
MN	1	Directors Only
RI	1	Directors Only
TX	1	Directors Only
WA	1	Directors Only
Total	120	

Table 5.2: Descriptive Statistics for the Total Sample

Summary statistics on Tobin's q, size, percentage outside directors on the board, and ownership of stock by outside directors, by all officers and directors, and by the CEO, for the 120 firms in the sample. Tobin's q, and data on size are for the end of the calendar year preceding the mailing of the proxy statement. Ownership and board composition data is from the proxy statements announcing the elimination of director liability. All proxies are from the period 1986–1988.

	Mean	**Median**	**Minimum**	**Maximum**	**Std. Dev.**
Tobin's q	1.46	1.17	0.36	6.00	0.907
Percent Outside Directors	60.60%	62.50%	16.70%	91.70%	16.70%
Percent of Stock Owned by Outside Directors	1.30%	0.09%	0.00%	32.10%	4.00%
Percent of Stock Owned by All Officers and Directors	11.20%	5.10%	0.10%	71.00%	13.70%
Percent of Stock Owned by the CEO	6.10%	0.87%	0.00%	70.60%	11.50%
Book Value of Total Assets (Mill.)	$3,193	$460	$11	$69,484	$9,504
Value of Common Stock (Mill.)	$2,786	$408	$5	$68,959	$8,688

Table 5.3: Descriptive Statistics for Alternative Samples

Mean statistics for a number of firm-specific variables. The statistics are provided for the total sample and for the various sub samples. Tobin's q and data on size are for the end of the calendar year preceding the mailing of the proxy statement. Ownership and board composition data is from the proxy statements announcing the elimination of directors' liability. All proxies are from the period 1986 –1988.

Firm Type	# Of Firms	Tobin's q	% Outside Directors	% Own. by All Off. and Dir.	BV of Assets (mill)
All	120	1.461	60.60%	11.20%	$3,193
Low q (50%)	60	0.883	58.20%	13.50%	$2,728
High q (50%)	60	2.039	62.90%	9.10%	$3,659
Low q (25%)	30	0.707	56.4%	15.3%	$3991
High q (25%)	30	2.695	65.3%	9%	$3677
LOP	16	1.031	50.2%	19.6%	$2006
HOP	66	1.749	60.9%	9.7%	$4710
LQLP	13	0.734	48.0%	19.6%	$2452
HQLP	3	2.319	59.3%	19.9%	$70
LQHP	23	0.96	59.4%	11.5%	$4877
HQHP	43	2.17	61.8%	8.7%	$4620
Contaminated	54	1.433	62.7%	10.5%	$1493
Uncontaminated	66	1.495	58.9%	12%	$4584
High % Outside Directors (>60%)	66	1.543	72.30%	6.30%	$4,070
Low % Outside Directors(≤60%)	54	1.36	46.20%	17.40%	$2,122

Table 5.4: Event Study Results - Excess Returns for Days (0,3)

Excess returns following the mailing of the proxy statement announcing the elimination of directors' liability for various sub samples. q-ratios are for the end of the calendar year preceding the mailing of the proxy statement. Percentage of outside directors is from the proxy statements announcing the elimination of directors' liability. Sample: 120 firms, between 1986 and 1988; day zero is the day the proxy is mailed; z-statistics are in parentheses.

Firm Type	Sample Size	Mean Return	Median Return	Standard Deviation	z Stat. (a)	Number Positive
Total Sample	120	0.77%	0.55%	4.528	1.588	67
Low q (50%)	60	1.47%	1.43%	5.369	2.153**	37***
High q (50%)	60	0.08%	0.014%	3.398	0.093	30
Low q (25%)	30	2.20%	1.547%	4.168	2.662*	20***
High q (25%)	30	-0.51%	-0.73%	3.724	0.28	12
LOP	16	4.72%	4.487%	6.152	2.992*	14*
HOP	66	0.47%	0.208%	3.661	0.804	35
LQLP	13	5.53%	4.721%	6.489	3.209*	12*
HQLP	3	1.21%	0.482%	2.904	0.229	2
LQHP	23	1.15%	1.507%	3.925	0.978	13
HQHP	43	0.11%	0.041%	3.505	0.282	22
Contaminated	54	0.05%	0.102%	4.283	0.118	29
Uncontaminated	66	1.36%	1.114%	4.668	2.031**	38
High % Outside Directors (>60%)	66	0.30%	-0.053%	4.733	0.479	33
Low % Outside Directors(≤60%)	54	1.357%	1.32%	4.234	1.837***	34***

* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

a. Constructed using standardized returns; see Dodd and Warner (1983) for the definition of this statistic.

Table 5.5: Differences in Excess Returns Between Event Study Samples

Differences in excess returns following the mailing of the proxy statement announcing the elimination of directors' liability for a number of samples of firms. Differences in cumulative standardized prediction errors were also compared with similar results as those for the CAR's. Tobin's q are for the end of the calendar year preceding the mailing of the proxy statement. Percentage of outside directors is from the proxy statements announcing the elimination of director liability. Sample: 120 firms, between 1986 and 1988.

	Mean Diff.	t-Test Stat. (a)	z Stat. (b)	c2 Stat. (c)
Low q(50%) - High q(50%)	1.39%	1.694***	1.8***	6.533**
Low q(25%) - High q(25%)	2.71%	2.654**	2.676**	8.067**
LOP - HOP	4.25%	3.593*	3.229*	15.647*
LOP - Total Sample less LOP firms	4.55%	3.969*	3.505*	16.955*
LQLP - Total Sample less LQLP firms	5.33%	4.293*	3.719*	18.347*
LQLP - High q (50%)	5.45%	4.357*	3.662*	16.388*
LQLP - HOP	5.06%	3.941*	3.491*	17.4*
LQLP - Low q(50%) less LQLP firms	5.18%	3.334*	3.346*	16.766*
LQLP - LQHP	4.38%	2.53**	2.684*	13.557*
LQLP - HQHP	5.22%	3.958*	3.542*	15.832*
Contaminated - Uncontaminated	1.31%	1.558	1.002	0.109
High - Low % Outside Directors	1.06%	1.279	1.73***	0.178

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

a. Two-sample, two-tailed, unpaired t-test statistic.
b. Two-sample, unpaired Mann-Whitney z-statistic.
c. Two-sample, unpaired Kolmogorov-Smirnov test statistic.

Table 5.6: Cross-Sectional Regression Results - 1

Cross–sectional regression results establishing the relation between the cumulative abnormal returns (CARs) and Tobin's q, and low operating performance. The dependent variables are the CARs over a window of (0,3) surrounding the mailing of a proxy statement announcing the elimination of directors' liability. Regressions 2–4 contain various control variables. t-statistics are in parentheses.

	Regr-1	Regr-2	Regr-3	Regr-4	Regr-5
Tobin's q	-0.012 (2.61)*	-0.011 (2.45)**	-0.021 (2.39)**	-0.01 (2.08)**	-0.01 (2.08)**
LOP	-	0.05 (3.97)*	0.048 (3.61)*	0.048 (3.60)*	0.047 (3.38)*
HOP	-	0.015 (1.69)***	0.016 (1.64)	0.014 (1.59)	0.017 (1.67)***
Provisions	-	-	-0.005 (0.77)	-	-0.003 (0.51)
DEL	-	-	0.002 (0.27)	-	0.001 (0.14)
Ln (Total Assets)	-	-	-0.001 (0.41)	-	-0.002 (0.74)
% Outside Directors on Board	-	-	-	-0.013 (0.47)	-0.009 (0.31)
% Shares Owned by Outside Directors	-	-	-	-0.032 (0.03)	-0.054 (0.50)
% Shares Owned by Insiders less CEO	-	-	-	-0.101 (1.19)	-0.112 (1.20)
% Shares Owned by CEO	-	-	-	0.006 (0.15)	-0.004 (0.10)
F Statistic for Regression	6.79*	7.79*	3.98*	3.485*	2.49*
R Squared	0.054	0.168	.174	.179	.186

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 5.7: Cross-Sectional Regression Results - 2

Cross–sectional regression results establishing the relation between the cumulative abnormal returns (CARs) and firm performance as measured by a dummy variable combining Tobin's q with a firm's income measure. The dependent variables are the CARs over a window of (0,3) surrounding the mailing of a proxy statement announcing the elimination of directors' liability. Regressions 2 – 4 contain various control variables. t-statistics are in parentheses.

	Regr.-1	**Regr.-2**	**Regr.-3**	**Regr.-4**
LQLP	0.059 (4.32)*	0.056 (3.94)*	0.055 (3.67)*	0.054 (3.51)*
HQLP	0.016 (0.62)	0.012 (0.47)	0.024 (0.91)	0.021 (0.76)
LQHP	0.015 (1.35)	0.014 (1.17)	0.016 (1.42)	0.016 (1.33)
HQHP	0.005 (0.50)	0.006 (0.56)	.005 (0.48)	.007 (0.64)
Provisions		-0.006 (0.84)		-0.003 (0.51)
DEL		0 (0.001)		0 (0.02)
Ln (Total Assets)		-0.001 (0.32)		-0.002 (0.61)
% Outside Directors on Board			-0.015 (0.56)	-0.011 (0.40)
% Shares Owned by Outside Directors			-0.016 (0.15)	-0.033 (0.30)
% Shares Owned by Insiders less CEO			-0.117 (1.32)	-0.123 (1.27)
% Shares Owned by CEO			0.005 (0.13)	-0.004 (0.09)
F Statistic for Regression	5.072*	2.966*	2.718*	1.997**
R Squared	.15	.156	.164	.169

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Table 5.8: Cross Sectional Regression Results (For Various Performance Measures and Various Event Windows)

Cross–sectional regression results establishing the relation between the cumulative abnormal returns (CARs) and various performance measures. The dependent variables are the CARs over various windows surrounding the mailing of a proxy statement announcing the elimination of directors' liability. t-statistics are in parentheses.

	Model 1			Model 2			Model 3			Model 4		
Window	**0,+3**	**0,+10**	**-30,+10**	**0,+3**	**0,+10**	**-30,+10**	**0,+3**	**0,+10**	**-30,+10**	**0,+3**	**0,+10**	**-30,+10**
Tobin's q	-0.016 (2.605)**	-0.01 (1.398)	-0.027 (1.688)***	-0.011 (2.451)**	-0.006 (0.805)	-0.019 (1.098)	-	-	-	-	-	-
LOP	-	-	-	0.049 (3.974)*	0.07 (3.682)*	0.107 (2.513)**	-	-	-	-	-	-
HOP	-	-	-	0.015 (1.685)***	0.003 (0.263)	0.008 (0.026)	-	-	-	-	-	-
OPINC / TA	-	-	-	-	-	-	-0.091 (1.658)***	-0.188 (2.417)**	-0.441 (2.575)**	-	-	-
Ind. Adj. (OPINC/TA)	-	-	-	-	-	-	-	-	-	-0.082 (1.885)***	-0.089 (1.427)	-0.278 (2.023)**
F Statistic	6.785**	1.954	2.849***	7.794*	5.788*	3.377**	2.756***	5.844**	6.629**	3.554***	2.036	4.092**
R Squared	5.40%	1.70%	2.20%	16.80%	13.20%	8.20%	2.50%	5.10%	5.70%	3.20%	1.80%	3.60%

Table 5.9: Cross-Sectional Regression Results (Contaminated vs. Uncontaminated Samples)

Cross–sectional regression results establishing the difference between a contaminated and uncontaminated sample with regard to the relation between cumulative abnormal returns (CARs) and firm performance as measured by a dummy variable combining Tobin's q with a firm's income measure (c). The dependent variables are the CARs over a window of (0,3) surrounding the mailing of a proxy statement announcing the elimination of directors' liability. t-statistics are in parentheses.

	Regression 1		**Regression 2**	
	Contaminated	**Uncontaminated**	**Contaminated**	**Uncontaminated**
LQLP	0.037 (1.56)	0.065 (3.78)*	0.021 (0.70)	0.068 (3.42)*
HQLP	0.055 (1.25)	-0.007 (0.23)	0.03 (0.44)	-0.023 (0.67)
LQHP	0.022 (1.33)	0.008 (0.53)	0.025 (1.23)	0.017 (1.06)
HQHP	0.009 (0.66)	0 (0.0)	.009 (0.60)	.008 (0.54)
Provisions			0.005 (0.503)	-0.011 (1.15)
DEL			-0.001 (0.10)	0.003 (0.27)
Ln (Total Assets)			-0.002 (0.44)	-0.004 (1.24)
% Outside Directors on Board			-0.051 (0.86)	0.021 (0.61)
% Shares Owned by Outside Directors			-0.45 (0.99)	-0.065 (0.56)
% Shares Owned by Insiders less CEO			0.014 (0.06)	-0.22 (1.90)***
% Shares Owned By CEO			0.014 (0.19)	-0.059 (1.11)
F Statistic for Regression	1.121	4.446*	.688	2.41**
R Squared	.084	.226	.153	.329

Two Tailed Significance
* Statistically significant at the 1% level, ** at the 5% level, *** at the 10% level.

Chapter 6: Conclusions and Implications

This paper provides evidence that a directors liability crisis did indeed occur in the mid 1980s. Shareholder's response to director resignations during the crisis period are significantly more negative than their responses to similar events after the crisis had ended. This difference in response results from the high cost involved in replacing resigning directors due to the relative scarcity of qualified directors during the crisis years.

The fact that the adoption of provisions limiting director liability, and thus eliminating the so called director liability crisis, was viewed by shareholders of many firms as a positive event, suggests that at least for these firms a crisis did indeed exist. For no group of firms did the elimination of directors liability result in a negative shareholder response. Thus, evidence is presented that legal liability has an impact both on the governance of the firm and, as a result, on firm value.

When shareholders' responses to directors resignations are further analyzed differences are found to exist between poorly performing and healthy firms. These differences are also found to vary between the period of the crisis and the period following it. During the crisis there is a positive correlation between performance and shareholder response to the resignations. The market thus views the resignations at poorly performing firms to be a more negative event than the resignations at firms that are doing well. Directors in poorly performing firms face a more litigious environment than their colleagues in healthier firms. Thus, they are less likely to want to serve on boards of financially distressed

firms. This is especially a problem for these firms because, as argued in this study, firms approaching financial distress have a special need for qualified independent directors. The more negative response to resignations from poorly performing firms can be explained by the fact that these directors are especially important to these firms and that because of the crisis they were especially hard to replace.

During the period following the crisis, shareholders reverse their responses to the resignations. During this period the relationship between the market's response and firm performance is negative. Firms that are doing well are penalized more for the loss of directors than poorly performing firms. Because the crisis had ended, during this period finding directors to replace those who resigned was not a problem. Thus, the resignation of directors from poorly performing firms is viewed as a positive event; the directors who brought the firm to its poor condition are being replaced with potentially more qualified directors. For firms that are doing well however, the resignations could be a signal that problems or conflicts exist for the firm. This is viewed as a negative signal by the market.

This research also documents a strong inverse relationship between the market's response to the adoption of provisions limiting directors liability and the firm's performance as measured by either Tobin's q or operating performance. While the adoption of liability-limitation provisions is viewed as insignificant by the shareholders of firms with high q and good performance, they are perceived as very valuable for low-q and poor-performance firms. This is consistent with the other findings in this study and in earlier research that documented the importance

of the board of directors (and especially its outside members) in under-performing firms. It is also consistent with the notion that the liability crisis, which these provisions sought to eliminate, effected poorly performing firms more strongly than it did firms that were doing well.

By limiting directors' liability, firms have been able to attract qualified directors to their boards. At least for poorly performing firms, these statutes contributed to restoring the delicate balance between two forces: shareholders' need to hold the board of directors accountable for its actions on the one hand and, on the other, the board's ability to function effectively without risking the personal wealth of its members.

The importance of these results is in providing further evidence as to the importance of corporate governance, and more specifically the board of directors, to firm value. External forces, such as the legal system, can have a serious and significant effect on a firms value and should be taken into account when attempting to explain shareholder and managerial behavior.

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